Regulatory Options for the Privatisation of Natural Monopolies With Particular Emphasis on the Privatisation of Telecom In New Zealand

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Preface

The increased prominence of market thinking has seen many Governments liberalise markets that were previously tightly controlled by regulation. Similarly, these Governments have at the same time questioned their role in society. This questioning has seen them first commercialise and in some cases privatise previously publicly owned trading enterprises. All of these initiatives have had the objective of increasing the efficiency by which resources are allocated in the economy. Liberalisation was designed to promote pricing efficiencies, while commercialisation and privatisation were designed to promote production and investment efficiencies.

While the promotion of efficiency has been the key motivation behind these reforms, these same reforms provide the incentive for some industries to act inefficiently - especially those industries with natural monopoly characteristics. These characteristics mean that it is productively efficient for one firm rather than many to produce desired output. However, because only one firm can exist in a market, commercialisation and privatisation give that firm, in some cases, the ability to "inefficiently" price above cost. That same ability not only allows the monopolist to affect the operation of monopoly markets, but also "competitive" markets - especially if the monopolist operats in those markets - because refusing to supply product essential for operation, or engaging in other forms of discrimination, would prevent competition. For these reasons Governments should consider regulating those industries.

When faced with the issue of regulation the first question a Government should ask is whether the monopolist can exploit. Obviously if the monopolist is threatened by entry - whether that be nationally by replication, or internationally by importation - or consumers can substitute or forgo the monopolist's product, then the monopolist does not have the power to exploit in any market. However, as entry barriers rise, and the dependency of customers increases, then the Government should consider regulation.

Then the issue facing Government is not whether the monopolist can exploit, but the extent to which the monopolist can exploit. For example, if barriers to entry are slight or if consumers can substitute (albeit imperfectly) with another product, then this loss to society may not warrant the imposition of costly, less-than-perfect, regulation. In other words, imperfect competition will often provide greater benefits to society than will regulation designed to correct these imperfections. However, as these imperfections increase, so does the likelihood of regulation. Regulation will seek to maximise efficiency benefits to society.

If Government decides to regulate, then it must choose between alternative regulatory policies. These policies are the subject of this thesis with evaluation based on two objectives. First, any regulatory solution should seek to promote economic efficiency and secondly, that solution, where at all possible, should fit within the Government's framework of a liberalised "market" economy. These tools are then applied to the recently privatised Telecom Corporation of New Zealand. This application, and initial regulatory evaluation, are conducted within a public policy rather than economics based framework.

Based on this reasoning I have split my thesis into three sections with each section sub-divided into chapters. The first section deals with the issues of liberalisation, commercialisation, privatisation and natural monopolies. Chapter 1 discusses the reasons and motives for liberalisation, commercialisation, and privatisation. Chapter 2 extends this analysis by looking at the factors that will determine when a natural monopoly exists. This chapter also shows how such a monopoly can best promote productive, allocative and dynamic efficiencies. Finally, chapter 3 considers when Governments should use regulation to promote efficiency - assuming a perfect world.

With this analysis in mind, section 2 attacks the issue of regulatory options. Chapter 4 considers the place that a threat to regulate has in the Government's regulatory armour and how such a threat can prevent both monopoly and competitive market exploitation. Chapter 5 examines the place of antitrust law within the Government's regulatory framework and how such law retains the principles of light-handed regulation, while controlling the monopolist's behaviour in competitive markets. Chapter 6 contemplates the issue of price control. This chapter discusses how Governments can use these controls to prevent exploitation in monopoly markets and, to a lesser extent, predation in competitive markets. Finally, chapter 7 looks at

the issue of structural separation and how such separation can increase competitive pressure. Such separation can reduce the need for regulation.

In section 3 I apply these regulatory tools to the telecommunications industry. Chapter 8 backgrounds the industry by considering its network characteristics; natural monopoly features; and the path Governments have taken to liberalise the industry in New Zealand, Britain, Australia, and the United States. Chapter 9 details the pricing issues within the industry and how a combination of light-handed controls, coupled with the threat of heavy-handed intervention, could effectively force cost based pricing. Chapter 10 deals with the important issue of industry competition and how a competitor must interconnect with the natural monopoly in order to compete. To ensure connection alternative regulatory options are considered. Chapter 11 then looks at how the monopolist can use other practices to engage in anti-competitive behaviour. This chapter looks at the mechanisms by which Governments could control these practices. Finally, chapter 12 summarises the findings of this section.

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Section One
Liberalisation and the Natural Monopoly

From the mid 1980s the New Zealand Government initiated a programme of market liberalisation and public sector commercialisation and privatisation to increase the level of efficiency in the economy. While these moves would generally achieve this, in some cases the objectives of liberalisation and commercialisation/privatisation would conflict. This would be most likely to occur with a natural monopoly because one organisation can produce desired industry output more efficiently than many.

If a natural monopoly exists, privatisation would ensure that management faced the maximum amount of pressure to produce output most efficiently. However, liberalised markets, and private ownership, enables the monopolist to exploit consumers. If the monopolist takes this opportunity (a reasonably valid assumption if the firm profit maximises), its actions would reduce economic efficiency.

This section will determine when a monopolist can exploit consumers and how governments should reduce this potential. Before considering these issues I will examine, in chapter 1, the New Zealand Government's rationales for liberalising and commercialising the New Zealand economy. Then chapter 2 will consider when a natural monopoly exists in an industry. Finally, chapter 3 will examine the role of regulation to prevent efficiency loss.

Chapter One
Economic Liberalisation in New Zealand

1.1 Introduction

During the last ten years economic policy in New Zealand has changed markedly - from the Government actively allocating resources, to the use of the market for this purpose. The reason for this change was a belief that the market would allocate resources more efficiently than the Government because consumers would, through their purchase decisions, optimise allocation.[1] In other words, *`the competitive market [was used] as a policy instrument'* rather than regulation.[2]

Besides liberalisation, the Government commercialised the public sector based on a private enterprise model.[3] While this decision affected the majority of state businesses and departments, the Government singled out some businesses for sale because of the belief that the private sector would manage their assets more efficiently.[4]

This chapter will examine the pressures for economic reform, followed by a section that looks at liberalisation. This will provide the background required for a more detailed discussion of commercialisation and privatisation in the state sector.

1.2 The Pressure for Change

There were many pressures explaining the shift toward a market economy. Internationally there was growing realisation that regulation had distorted prices, which led to an inefficient

1. See Blyth C., 'The Economists' Perspective of Economic Liberalisation,' in Bollard A., and Buckle R. eds., *Economic Liberalisation in New Zealand,* Allen and Unwin/Port Nicholson Press, Wellington, 1987, pp 3-4.

2. See Easton B. ed., 'The Commercialisation of the New Zealand Economy: From think Big to Privatisation,' in *The Making of Rogernomics,* Auckland University Press, Auckland, 1989, p 115.

3. Ibid.

4. See Jennings S., and Cameron R., 'State-Owned Enterprise Reform in New Zealand,' in Bollard A., and Buckle R. eds, *Economic Liberalisation in New Zealand,* Allen and Unwin/Port Nicholson Press, Wellington, 1987, p 121.

allocation of resources. This effect prompted many governments to deregulate markets because they believed this strategy would allocate resources more efficiently. Deregulation would, in turn, better promote the economic goals of allocation and distribution, while tight monetary control would further reinforce these goals by achieving economic stability.[5]

Previously, governments attempted to achieve these goals by mixing market operation with regulation. They selected this mix because they believed that if markets operated without restriction, it would at times produce "inefficient" results and could even disadvantage certain sectors of the economy. Thus regulation was used to correct inefficiencies and promote equity at the expense of efficiency.[6]

Market failure arguments have certainly been prevalent in New Zealand (see appendix one for a brief resume).[7] Early regulatory initiatives addressed the allocative inefficiencies of monopoly by using antitrust regulation. However, the Government started to use more explicit control during the 1930s as general distrust of the market system grew. Later decades saw less restriction, but the oil price shocks of the 1970s and the wage and price freeze of the early 1980s reinforced this country's use of regulation to manipulate the market.

Economists began to question this stance more and more because they believed it promoted managerial inefficiency; induced commercially irresponsible behaviour; and was inequitable because intervention often assisted one firm at the expense of another.[8] In other words, the economists were concerned that:

> ... government economic policies distorted relative prices in New Zealand so that individual households and firms could not make economic decisions based on the full costs and benefits to the nation.[9]

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5. Blyth, supra, note 1, pp 3-4. Also Miller R.A., 'From Macro to Micro: The Re-emergence of Efficiency Considerations in Economic Policy,' in Bollard A. ed., *The Influence of American Economics on New Zealand Thinking and Policy,* NZIER Monograph 42, Wellington, 1988. Miller comments that micro policies will best achieve distribution and allocation while macro policies will best achieve stabilisation, p 14.

6. Miller, ibid, p 14, 24.

7. See Bollard A., 'More Market: The Deregulation of Industry,' in Bollard A., and Buckle R. eds., *Economic Liberalisation in New Zealand,* Allen and Unwin/Port Nicholson Press, Wellington, 1987, p 26.

8. Easton, supra, note 2, pp 6-7.

9. See Spender G., and Carey D., 'Financial Policy Reform,' in Walker S. ed., *Rogernomics: Reshaping New Zealand's Economy,* GP Books, Wellington, pp 49-50. The authors comment further that *'important distorting non-financial economic policies included (highly variable) industry assistance, state enterprise output pricing that often did not reflect production costs and acceptance of restrictive labour market practices. The Government's financial policies also distorted relative prices, in particular by artificially discouraging net savings in New Zealand and by encouraging investment in some activities at the expense of others',* p 50.

Further more, they claimed reliance worsened the economy because rates of economic growth were falling, while inflation and external debt levels were rising. These pressures, in turn, placed mounting pressure on the exchange rate which the Government devalued periodically over this time.[10]

The 1975-1984 National Government was slow to change direction.[11] This caused the party to rebel against Government policy and even forced some to quit the party to form the New Zealand Party - a party which had policies emphasising the market.[12] Other political parties also expressed concern. For example, the traditionally "interventionist" Labour Party began to seriously question the regulatory stance of National.

This questioning translated to policy with the election of a Labour Government in 1984. The new Finance Minister, the Hon. Roger Douglas (MP), criticised the approach of National and in particular its inability to change direction. He explains:

> One of the basic flaws ... of the previous administration had been a growing confusion over the role of government. It was a confusion, certainly, which had developed from historical factors and past ways of acting, socially, economically and politically. However, what serves a nation best at one stage of its development will not always be the most appropriate answer some 50 years later.[13]

Douglas was central to the formulation of Labour's economic policy, but he was not always sure of the Government's role because on a number of occasions he advocated intervention.[14] However, his views, along with those of the shadow cabinet, changed when Doug Andrew, a Treasury adviser, was seconded to the Parliamentary Labour Party in 1983.[15] Given Labour's desire to reform the economy, there was debate within cabinet on how reform

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[10]. See Duncan I., and Bollard A., *Corporatization and Privatisation: Lessons From New Zealand,* Oxford University Press, Auckland, 1992, pp 5-6.

[11]. However, some change did occur. For example, a National Administration deregulated the transport industry.

[12]. See James C., 'Overview,' in Walker S. ed., *Rogernomics: Reshaping the New Zealand Economy,* GP Books, Wellington, p 1.

[13]. See Douglas R., 'The Ends and the Means,' in Walker S. ed., *Rogernomics: Reshaping New Zealand's Economy,* GP Books, Wellington, p 22.

[14]. See Douglas R., *There has got to be a Better Way!,* Fourth Estate Books, 1980. He openly advocates direct state investment and the state influence of private investment. Also see a paper written by Douglas R:, *Does New Zealand Have an Economic Future?* In this paper Douglas advocates intervention to influence the exchange rate. He also advocates favourable taxation and protectionist policies.

[15]. See Oliver H., 'The Labour Caucus and Economic Policy Formation, 1981 to 1984,' in Easton B. ed., *The Making of Rogernomics,* Auckland University Press, Auckland, 1989, pp 18-20.

would begin.[16] Part of the Cabinet wanted to introduce change by using a consensus `corporatist' style of government, which the Australian Federal Labor Government used to strike an Accord with the Australian Council of Trade Unions. This approach did not suit all in Cabinet because others favoured a dictatorial `elitist' style that did not allow for consensus.

Douglas favoured elitism because he thought it would limit the ability of lobby groups to influence economic policy.[17] He was also aware of the problems in obtaining consensus because he postulated that while there was broad agreement on the need for change, these parties would not reach similar agreement on the mechanism to achieve change.[18] This probability, and the constitutional crisis that occurred over the exchange rate when elected, enabled Douglas to adopt the elitist approach. Such an approach allowed for the quick reformation of the economy in a manner that he desired - something quite unlikely with corporatism.[19]

1.3 The Content and Process of Liberalisation

During the early 1980s the Labour Government's economic policy committee designed a series of reforms that transformed New Zealand's economy into one of the most liberal in the western world. The objective of reform was to achieve a more efficient allocation of resources by providing producers with "undistorted" signals concerning the needs of consumers.[20] In other words, the reforms removed internal and external protection.

The initial thrust of reform was to increase internal market competition by removing and reducing internal protection, subsidies and price controls that affected productive sectors of the economy. Then the Government deregulated financial markets to allow free interaction with the international community. This would avoid the need for managed exchange adjustments.

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16. Ibid, pp 31-35 and pp 40-43.

17. Ibid, pp 24-25.

18. See Dalziel P., 'The Economic Summit: What People Were Thinking,' in Easton B. ed., *The Making of Rogernomics*, Auckland University Press, Auckland, 1989, p 63. He comments this thinking was vindicated by the 1984 Economic Summit

19. Oliver, supra, note 15, p 50.

20. Duncan et al., supra, note 10, pp 5-10.

Spurred on by the objective of further efficiency, the Government lowered personal and company taxes and introduced a flat rate consumption tax (GST) over all goods and services. These changes rectified, to an extent, the widely held criticism that present tax law did little to provide consumers with correct price signals because varying rates of tax were applied to different sectors of the economy.[21]

The Government then set about removing external barriers to competition by reducing tariffs and removing import licensing regulations. These moves opened New Zealand markets to greater foreign competition. The Government believed that competition would force established firms to become more efficient or exit the industry if overseas rivals had a comparative advantage in the production of a particular commodity. Along with these reforms, the government sought to limit inflationary pressures by controlling the supply of money. Achieving price stability would, in turn, further enhance the objectives of market deregulation because consumers could then distinguish between relative and general price changes.

Perhaps surprisingly, and in conflict with its other policies, the government failed to reform the labour market, which some say lengthened the adjustment process and intensified industry costs.[22] Treasury explains:

> ... wage adjustments, however, to the extent that they go beyond what employers would have freely negotiated, jeopardise international competitiveness, the balance of payments and employment growth; on the other hand, to the extent that they are fully reflected in prices, wage increases imply renewed inflation.[23]

However, even without labour market reform, reform in other areas allowed the economy to adjust more rapidly to change. Collins comments that this process led to a dramatic realignment of resources and was effective in driving inefficient producers out of business.[24] The producers left were now subject to competitive pressures and helped internationally by low inflation and nationally by the lack of economic distortion.

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21. Blyth, supra, note 1, p 9.

22. See Upton S., 'The Opposition Assessment,' in Walker S. ed., *Rogernomics: Reshaping New Zealand's Economy,* GP Books, Wellington, p 36-37.

23. The Treasury, *Economic Management,* Government Printer, Wellington, July 1984.

24. Collins, S., 'Rogernomics: The Economic Aftermath,' in Easton B. ed., *The Making of Rogernomics,* Auckland University Press, Auckland, 1989, p 192.

1.4 Commercialisation in New Zealand

Besides liberalisation, the Government commercialised the public sector to increase its efficiency. This policy had the objective of increasing the efficiency of trading enterprises that made a large contribution to the economy but performed relatively poorly when compared to the private sector.[25] Clark explains the public sector:

> ... used labour and capital inefficiently, and had been less profitable. [However, they had] more often than not had been obliged to pursue non-commercial as well as commercial goals ... [and she] advocated a more rational and business-like use of ... resources.[26]

Treasury believed these enterprises failed to be efficient with *`their pricing policies and [in how] ... they used their resources'*. This inefficiency, Treasury claimed, led to poor investment decisions; non-competitive pricing; misallocating resources; and crowding out the efficient private sector.[27] Therefore focusing on performance would increase efficiency not only within the organisation but in all sectors of the economy dealing with them?[28]

Inefficiency was not entirely the fault of these organisations. Successive governments failed to supply them with clear non-conflicting objectives; provided an operating environment lacking competition and furnished with special assistance; and had failed to develop effective monitoring and control techniques. Treasury recognised these faults and recommended the removal of *`obstacles and replacing them with objectives and an environment which provide[d] appropriate incentives'* reflecting the characteristics of industry.[29]

The Government adopted these recommendations by establishing state-owned assets as commercial trading enterprises (SOEs). The SOE model paid attention to influences that affected private sector performance and placed considerable emphasis on recent economic literature that highlighted the concept of property rights and the role of transaction and agency

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[25]. Jennings, et al., supra, note 4.

[26]. Clark M., and Sinclair E., *Purpose, Performance and Profit: Redefining the Public Sector,* Government Printer, Wellington, 1986, p viii.

[27]. The Treasury, supra, note 23. Also see Deane R.S., 'Reforming the Public Sector,' in Walker S. ed., *Rogernomics: Reshaping New Zealand's Economy,* GP Books, Wellington, pp 117-118.

[28]. Jennings et al., supra, note 4, p 339. In this chapter see footnote 10 for evidence of poor SOE performance.

[29]. The Treasury, supra, note 23.

costs in private sector performance.[30] The application of these concepts helped clarify the relationship between the Government and SOEs; gave SOEs clear objectives; enhanced the SOEs' ability to adapt and respond to change; allowed for delegation; improved accountability mechanisms; and provided better performance incentives.[31]

Despite commercialisation, problems still remained over the application of these economic principles to SOEs because *`public ownership [left] a substantial area of economic activity free from the system of private property rights [which] may ... impair the mechanisms described above'*.[32] This will reduce the mechanisms available to monitor managerial performance because the share market, the market for corporate control and the threat of bankruptcy do not impinge on managerial actions.[33] The absence of these controls may, in turn, increase the transaction costs associated with gathering information concerning public sector organisations.

Treasury was also sceptical about the ability of the reform process to force a publicly owned organisation to operate as if it were in the private domain. It indicated that the failure to transfer ownership and control would affect the success of reform because it gave little *`incentive for the ultimate owners to monitor performance ... and [reduced] the incentive for managers to strive for maximum performance'*.[34] With this in mind Treasury recommended the privatisation of state-owned assets to achieve the best possible economic outcomes by subjecting *`those organisations to the full range of competitive market disciplines'*.[35]

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30. Deane, supra, note 27, pp 118-119. Deane explains that promoting property rights ensures that the people most affected by an economic decision would be those who efficiently seek information to constrain their actions. These rights allow the owner to determine how an asset will be used or transferred and gives an ability to determine how income from that resource should be used. Agency costs occur when the interests of owners diverge from the actions of management and can be reduced by owners observing a manager's actions. Transaction costs form the basis of most economic activity and refer to the cost of transacting between parties.

31. Ibid, pp 117-118. For overview see Duncan et al., supra, note 10, pp 10-14, 21-32.

32. Deane, supra, note 27, p 120.

33. Jennings et al., supra, note 4, pp 133-4. Also see De Alessi L, 'Private Property and Dispersion of Ownership in Large Corporations,' *Journal of Finance*, vol 28, 1973, p 845. He comments that if *'there is no organised market for shares in political firms, and the greater is the attenuation of private property rights, whether by explicit or implicit regulation or by outright government ownership, the greater is the managers' opportunity for utility maximising behaviour and the weaker is the predictive content of the wealth-maximizing hypothesis'*.

34. The Treasury, supra, note 23, p 293.

35. Jennings et al., supra, note 4, p 152. Note: Jennings and Cameron were Treasury officials at the time. Also Deane, supra, note 27, p 124; Treasury, supra, note 23, p 113; and Duncan et al., supra, note 10, pp 33-34.

Douglas supported this stance.[36] In his 1988 Budget statement he made the following comment on the value of privatisation over commercialisation:

> In spite of the considerable productivity gains achieved to date, the returns from the state owned enterprises are still expected to be below the market average. Retaining ownership of all these businesses would entail the ongoing risk that a large portion of New Zealand's assets would underperform. The taxpayer would bear the risk of future politicians' pretensions to business management ... Taking the decision to withdraw from ownership of some businesses is a further stride towards enabling the Government to concentrate on fulfilling its proper role.[37]

However, general party policy was not so supportive.[38] But the Government's inability to control spending made privatisation possible because the Government could finance the deficit by selling assets. Such an explanation was more politically acceptable than one that emphasised the virtues of the market.[39]

Under this policy initial sales were of assets where a competitive market existed or could exist with a liberalised economy. Other proposed sales did not share these virtues because industry cost structures made it more efficient for one firm rather than many to produce desired output.[40] Such organisations are natural monopolies and under private ownership they can reduce efficiency by using the monopoly to exploit consumers. The ability to exploit is the subject of my thesis.

1.5 Conclusion

This chapter has outlined the development of liberalisation and commercialisation in New Zealand. The objective of these strategies was to increase the efficiency of resource allocation in the economy by removing distortions that affected the operation of the market.

However, commercialisation will not always provide the public sector with the incentives facing the private sector - for this reason privatisation occurred. While most of these sales were into a competitive market, others were not, which left the potential for these organisations to exploit their position to the extent of their market power. The next two chapters will explore this potential.

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[36]. Douglas, supra, note 13, pp 24-25.

[37]. Douglas R., *The 1988 Budget*, Government Printer, Wellington, 1988, p 14.

[38]. Easton, supra, note 2, pp 123-124.

[39]. Ibid, pp 125-126. The majority of Cabinet Ministers gave debt reduction as the primary motivation for sale. Douglas and Treasury, on the other hand, exalted the virtues of efficiency.

[40]. For an overview of the privatisation process see Duncan et al., supra, note 10, pp 33-44.

Chapter Two
What Are Natural Monopolies?

2.1 Introduction

The object of market liberalisation and public sector commercialisation was to make the allocation of resources in the economy more efficient - in other words, maximise society's welfare. Maximisation will occur when industry costs are at their lowest point and firms practice efficient "normal-profit" pricing.[1] These concepts are defined more formally as productive and allocative efficiencies:

Productive Efficiency: concerns minimising cost for the production of a given quantity of good.

Allocative Efficiency: occurs when the price consumers are prepared to pay for an additional unit of output just covers the costs of producing it.[2]

An industry will be productively efficient when it produces the output consumers demand at the least possible cost. It will be this point that determines the number of firms in an industry because each firm will seek to minimise cost to produce optimal output, the total of which will equate to industry output. By being productively efficient the industry can be allocatively efficient provided the price charged equals the marginal cost of supply.[3]

This chapter will determine when it will be productively efficient for one firm to produce entire industry output, given current levels of technology.[4] Then I will discuss how technology changes will affect this classification, followed by a section that discusses how a one firm industry will maximise allocative efficiencies.

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1. Waterson M., *Regulation of the Firm and Natural Monopoly,* Basil Blackwell, 1988, chapter 2, p 13.

2. Electricity Task Force Report, *Towards Efficiency in the New Zealand Electricity Industry: A guide to the New Zealand Electricity Industry and the Report of the Electricity Task Force,* Government Printer, Wellington, September 1989, pp 8-9.

3. Waterson, supra, note 1, p 2, 13.

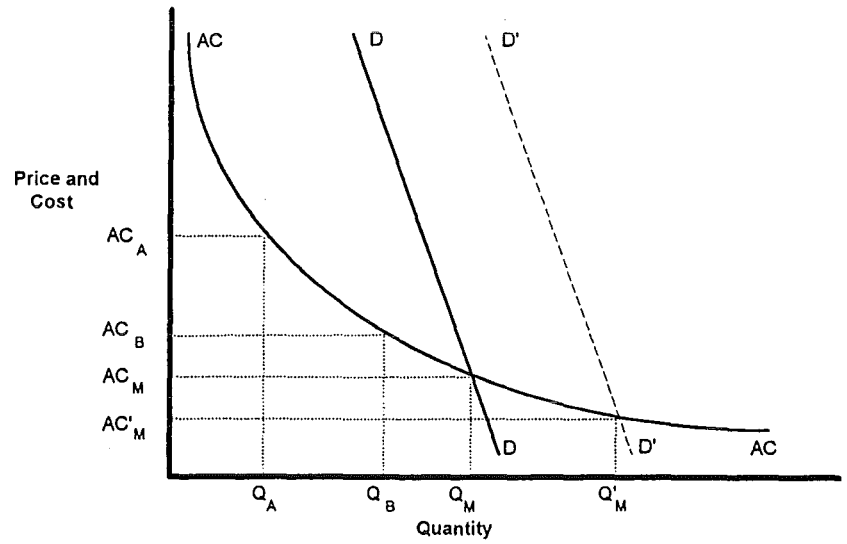
4. See Sharkey W.W., *The Theory of Natural Monopoly,* Cambridge University Press, New York, 1982. See chapter one for an overview of natural monopolies. Also ibid, pp 59-61, for an example of price efficiency and cost minimisation.

2.2 The Natural Monopoly

A natural monopoly will exist when one firm can meet market demand more efficiently than several - in other words, *`an industr[y's] cost function is such that no combination of several firms can produce an industry output vector as cheaply as ... a single supplier'*.[5] When this occurs a firm's cost function will be subadditive compared to the cost of several firms[6]

In a single product firm examining the average cost function [C(Q)/Q] will determine whether costs are subadditive. For example, if two firms produced the break even output Q_m, the cost of production would rise from AC_m because firm A would produce Q_a and firm B would produce Q_b.[7] This occurs because fixed investment costs make it more economic for one firm to produce output than two. Subadditivity remains if demand [D] alters to D', therefore if average costs fall over all output a global (strong) natural monopoly will exist[8]

Global Natural Monopoly of a Single Product Supplier



(figure 2.1)

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5. Baumol W.J., Bailey E.E., and Willig R.D., 'Weak Invisible Hand Theorems on the Sustainability of Multiproduct Natural Monopoly' *American Economic Review*, vol 67, 1977, pp 350-365.

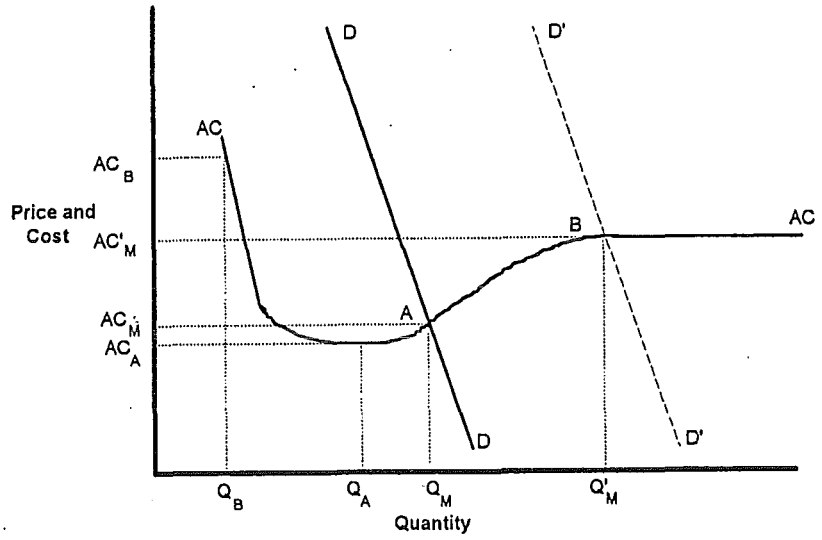
6. Sharkey, supra, note 4, p 58. He shows cost sub-additivity as a necessary condition for a natural monopoly. He states that subadditivity arises from plant (technology) and firm (organisational) advantages. Organisational advantages only arise with deviations from the perfectly competitive market which may give one firm an advantage over another, pp 74-80.

7. Evans D.S. ed., and Heckman J.J., 'Natural Monopoly,' in *Breaking Up Bell: Essays on Industrial Organization and Regulation*, North-Holland, New York, 1983, p 129.

8. For discussions on global natural monopolies see Sharkey, supra, note 4, p 59; Berg S.V., and Tschirhart J., *Natural Monopoly Regulation: Principles and Practice*, Cambridge University Press, New York, 1988, p 24. Waterson, supra, note 1, p 18. Ibid, p 130.

A natural monopoly will not only exist if average costs fall over an entire output range.[9] For example, a single supplier produces Q_m at cost AC_m. If two firms produced that output a higher total cost would result because while one firm could produce Q_a at a lower cost, the other would produce Q_b at a much higher cost.[10] However, subadditivity will not remain if demand alters to D' because if Q_m' was divided among two firms a lower average and total cost will result. So when average costs fall and then rise when output increases, a local (weak) natural monopoly exists.[11]

Local Natural Monopoly of a Single Product Supplier



(figure 2.2)

This form of analysis has the advantage of simplicity in that an examination of the average cost curve will best determine whether a natural monopoly exists in a single product setting. However, Baumol et al. explain that most firms:

> ... in reality produce and sell more than one good or service. This multiplicity of outputs can take the form of a variety of physically-dissimilar offerings, a wide variety of offerings of similar outputs (such as shoes of different sizes) adapted to the demands of individual consumers, or just physically-similar outputs sold at various places or time.[12]

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9. Berg et al., ibid, pp 23-24.

10. Evans, supra, note 7, p 129.

11. For a discussion on local natural monopolies see Sharkey, supra, note 4, p 59 and Berg et al., supra, note 8, p 24.

12. Baumol W., Panzar J., and Willig R., *Contestable Markets and the Theory of Industry Structure,* Harcourt, Brace, Jovanovich, San Diego, 1982, p 3.

For this reason economists have extended natural monopoly analysis into a multiproduct setting.[13]

This extension made the question of whether a natural monopoly exists more complex because while subadditivities will still be necessary for a natural monopoly, they relate not only to single product economies, but also to those recurring from multiple product production.[14] Therefore average costs will not help determine whether a multiproduct natural monopoly exists because economists cannot establish an unambiguous measure of aggregate output to divide into total cost. Instead, other cost functions should establish whether a natural monopoly exists.

Initially, economists could measure multiproduct economies of scale by taking the average cost of all production [AC_m] and projecting a ray from the origin (the point of no production) into output space to determine its direction with proportionate changes in output.[15] Declining average costs occur when, for a given output mix, the ray increases at a decreasing rate (figure 2.3a). They could then calculate multiproduct scale economies [S_m] by taking the average production cost [AC_m] and dividing it by the corresponding marginal cost [MC_m]. If greater than one, they could imply multiproduct economies of scale at that output.[16]

A second method to determine subadditivity measures product specific economies of scale by examining the behaviour of a particular cost surface if we vary only one output. This concept is known as average incremental cost and occurs with returns to a factor.[17] We can estimate product specific returns to scale [S_p] by dividing AIC_{p1} with product specific marginal costs MC_p. If greater than one, product specific economies of scale exist.

A multiproduct firm may also benefit from joint production. This occurs when costs of production are less for one firm producing two goods, Q_1+Q_2, than when two firms produce each individually. Economists define this synergy as economies of scope. These economies may arise from better resource utilisation caused by reduced inventory holding costs, or better

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13. Berg et al., supra, note 8, p 34.

14. Ibid, pp 34-36.

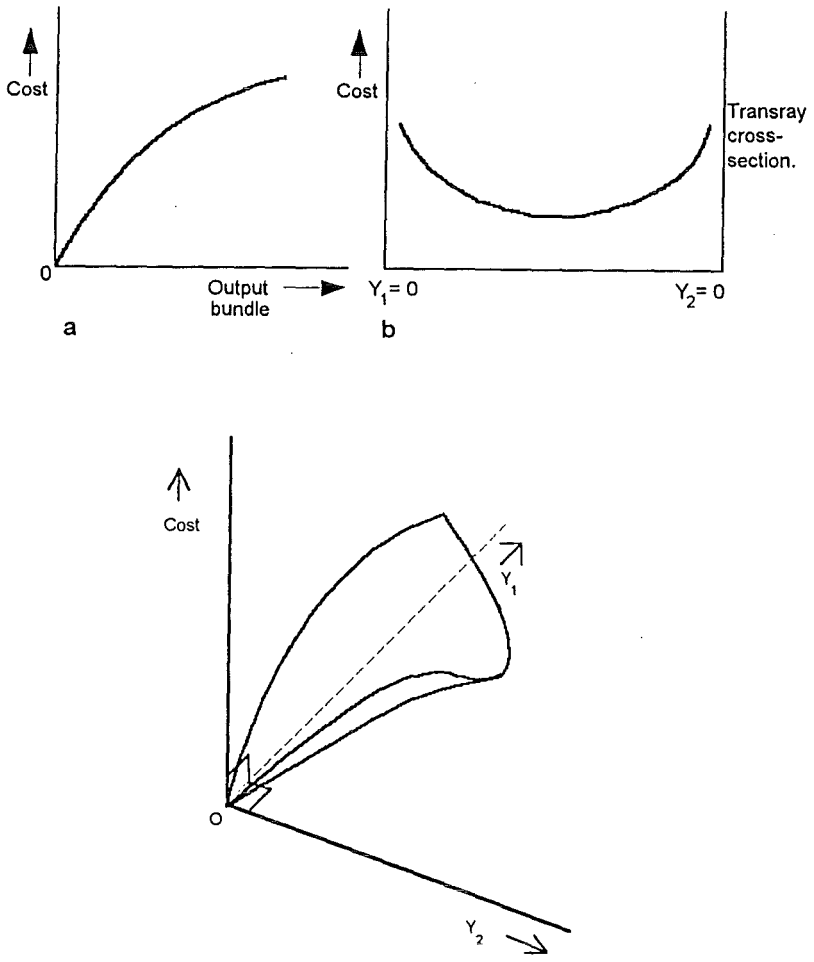
15. Sharkey, supra, note 4, p 65. Ibid, p37. Waterson, supra, note 1, pp 19-20.

16. Waterson, ibid, pp 19-20.

17. Ibid, p 20.

use of capacity.[18] Having economies of scope, however, does not make joint production beneficial because if each product was a gross substitute for the other, gaining economies of scope will lessen product specific economies of scale. This occurs because increasing the sales of one product will lessen the sales of another.[19]

Declining Ray Average Cost plus Transray Convexity of a Multiproduct Firm



(figure 2.3)

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[18]. For examples ibid, pp 20/21; Berg et al., supra, note 8, pp 35-36 for discussion, pp 41-42 for examples; and Sharkey, supra, note 4, pp 65-66 for discussion.

[19]. The concept gross substitute refers to a measure called cross elasticity of demand. This measure looks at the relationship between two goods given a change in the price of one good. For example, if the price of good a increases and the quantity demanded of good b increases, goods a and b are complementary goods. If the quantity demanded of good b declines then good a and b are substitutable goods. If the quantity demanded of good b remains the same good a and b are neither complements nor substitutes. For a more formal definition see Begg D., Fischer S., and Dornbusch R., *Economics*, second edition, McGraw-Hill, London, p 80.

Due to the problems with these measures, some have sought to determine whether a natural monopoly exists by altering the proportions of relative outputs while maintaining the same level of input. Such alteration has the objective of determining the shape of the cost function (see figure 2.3b where each point on the graph represents a different ray from the origin).[20] If the transray section is convex, the:

> ... cost of producing a weighted average of a pair of output bundles q^a and q^b [will not be] greater than the weighted average of the costs of producing each of them in isolation. That is to say, complementaries in production outweigh scale effects.[21]

By combining these measures we can determine whether cost subadditivity exists in a multiproduct setting.[22] The first sufficient measure of subadditivity occurs when there are economies of scope and average incremental costs are decreasing (a conclusion we would expect because if joint production is cheaper and cost subadditivity exists, costs will be less). A second measure guaranteeing subadditivity occurs when there are declining ray average costs and transray convexity at a given output point.[23] This measure succeeds where the combination of economies of scale and scope did not because it more rigorously examines cost complementaries by measuring more than one blend of output given fixed inputs.[24]

From the above conditions a natural monopoly will be global when economies of scope and product specific scale economies are present over an entire output range.[25] Similarly, a global natural monopoly will exist if there were declining ray average costs and a hyperplane through the cost function was transray convex over all output. If either of these conditions do not hold, but hold over part of a firm's output, a local natural monopoly will exist.

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20. Sharkey, supra, note 4, p 66 and Berg et al., supra, note 8, pp 37-38.

21. Spence M., 'Contestable Markets and the Theory of Industry Structure: A Review Article,' *Journal of Economic Literature,* vol 21, pp 981-90.

22. For summaries see Berg et al., supra, note 8, pp 39-41 and Waterson, supra, note 1, pp 25-26. For a more detailed explanation see Sharkey, supra, note 4, pp 67-73.

23. For the proof see Baumol W.J., 'On the Proper Cost Tests for Natural Monopoly in a Multiproduct Industry,' *American Economic Review,* vol 67, 809-22.

24. Waterson, supra, note 1, p 21.

25. Evans et al., supra, note 7, p 133.

2.3 Technological Change

Until now demand alterations have been the only factor that has affected the categorisation of an industry as a natural monopoly because I have assumed that the level of technology available to society will remain unchanged.[26] This will not always occur because over time technological advances will alter the cost of production that could, in turn, affect the categorisation of an industry as a natural monopoly.[27]

Technological advance will alter the shape of the average cost curve. The monopolist should invest in such technology efficiently (until now I have only considered productive and allocative efficiencies). Such investment can be more formally defined as dynamic efficiency:

> **Dynamic Efficiency:** making timely investments in an industry in order to keep the costs of production as low as possible. This means avoiding either excess capacity or a shortage of capacity unless new capacity makes old capacity obsolete because of cost advantages.[28]

To be productively efficient, the monopolist should make optimal technologically advancing investments now to minimise future costs. These investments will, in turn, determine whether a natural monopoly that exists now will continue to exist in the future.

2.4 Allocative Efficiency

To date I have discussed productive and dynamic efficiencies. I will now turn to the final measure of efficiency - allocative efficiency. For simplicity I will base my analysis on global and local single product firms, although it will apply equally to multiproduct firms. I will also assume the firm has maximised productive efficiencies.

To be allocatively efficient the price consumers pay for an additional unit of output must just cover the costs of producing that unit.[29] This will occur when the marginal cost of supply

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26. Ibid, pp 128-130, for a discussion on demand alterations.

27. See Schneider E., 'Real Economies of Integration and Large-Scale Production versus Advantages of Domination,' in Chamberlin E.H. ed., *Monopoly and Competition and Their Regulation*, MacMillan and Co Ltd, London, 1954. The author discusses that technology can shift the average cost curve either way. Therefore a natural monopoly may either be created or lost. Also see Waterson, supra, note 1, p 18.

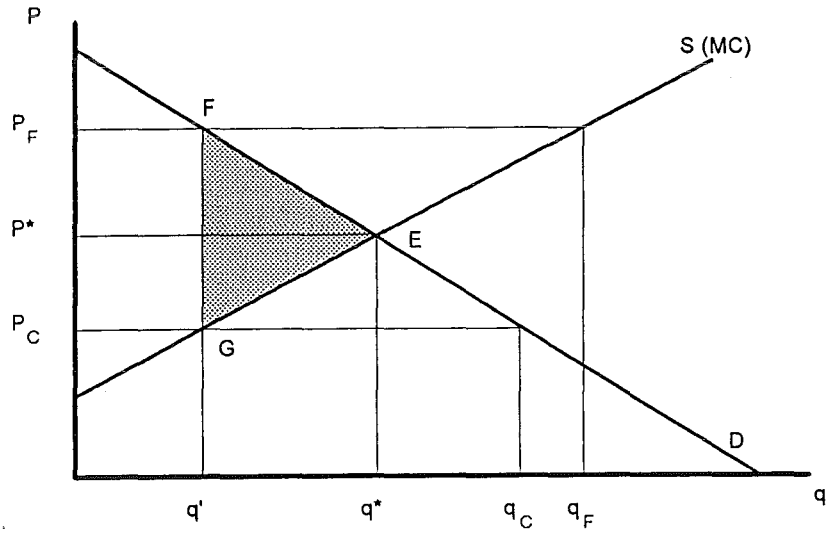
28. The Electricity Task Force Report, supra, note 2, pp 8-9.

29. Ibid. In commenting on allocative efficiency the writers state that *'people place value on the goods that they consume, and that value can be measured by the price they are willing to pay. Similarly, producers incur costs when they produce goods. If the value that a person gets from consuming an extra unit of a good is greater than the cost of producing that unit, then producing more of that good is worthwhile. On the other hand, if a good costs more to produce than the value that people place on consuming it, then less of that good should be produced. Allocative efficiency is achieved where the cost of*

equals the marginal benefit of consumption (ie. where marginal cost cuts demand); the point that maximises producer and consumer surplus.[30] Taken together both surpluses measure economic welfare that, when maximised, will be Pareto-optimal. When this occurs *`no action [will] remain untaken that, without harming another, could improve one person's situation as that person sees it.*'[31] See figure 2.4 for this position.

Pareto-efficient welfare maximisation will occur at point E where the sum of producer and consumer surplus equals the area P_sEP_d. If prices vary from point E because of an imposed price floor or ceiling, this shift will not maximise welfare. For example, a price ceiling P_c will create a welfare loss represented by the area FEG while a price floor, P_f, will create a welfare loss depicted by - but only by coincidence - the same area.[32] These movements will reduce Pareto-efficiency because the allocation will make the producer or consumer worse off.

Maximised Producer and Consumer Surplus



(figure 2.4)

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producing an extra unit (marginal cost) is just equal to the value gained from consuming it'. For proof see Sherman R., *The Regulation of Monopoly,* Cambridge University Press, New York, 1989, chapter 2, p 18-21.

30. Sherman, ibid, p 18, 8. Consumer surplus measures *'the total net benefit that a consumer enjoys from being able to purchase a good or service. It is intended to represent the amount a consumer would be willing to pay for the opportunity to purchase at a certain price'.* Producer surplus, on the other hand, represents the difference between total revenue and total cost. Also see Crew M.A., and Kleindorfer P.R., *Public Utility Economics,* The Macmillan Press Ltd, London, 1979, pp 14-18.

31. Ibid, p 8.

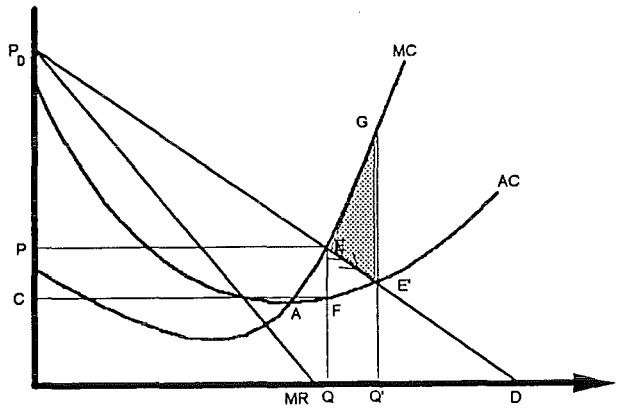
32. In maximising producer and consumer surplus I assume that the weights placed on both surpluses are the same. This may not be true but equity issues are beyond the scope of this thesis. Ibid, chapter 6, for a discussion of equity issues.

The purpose of this section is to determine when a local and global monopolist will maximise welfare. Then I will critically assess whether the monopolist can maximise welfare by charging marginal cost, under the theory of second best.

Local Natural Monopoly

If a local natural monopolist prices based on marginal cost, a profit represented by the area PEFC, in figure 2.5, results. Pricing at this point will maximise welfare because if the monopolist were to price at average cost, point E', this would reduce welfare by the area EE'G because consumers would over-consume by the distance Q-Q'.[33]

Local Natural Monopoly of a Single Product Supplier



(figure 2.5)

Global Natural Monopoly

With a global monopoly marginal cost pricing will cause an operating loss, represented by the area $P_{ac}P_{mc}EE'$, because a marginal price will never cover the average cost of supply. Consequently the monopoly cannot function in the long run so the monopolist must maximise welfare subject to the constraint of breaking even.[34]

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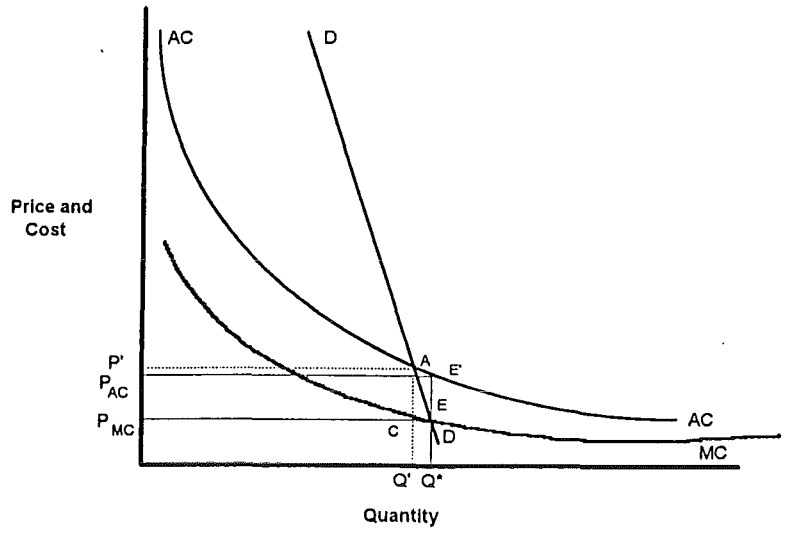
33. For further discussion on the local natural monopoly pricing problem see Sharkey, supra, note 4, pp 86-90; Berg et al., supra, note 8, pp 29-30; Waterson, supra, note 1, pp 17-18 and ibid, pp 80-82.

34. Berg et al., supra, note 8, pp 45-51; Waterson, supra, note 1, pp 22-25; and Sherman, supra, note 29, pp 38-39.

Global Natural Monopoly of a Single Product Supplier



(figure 2.6)

This section will briefly discuss how the monopolist can maximise welfare when average cost exceeds marginal cost. To do this I will initially discuss *first-best* pricing solutions, followed by *second-best* alternatives. However, in presenting these alternatives one must remember that this thesis will not determine the relative merits of each but present them as alternatives given a break even constraint.

a) First-Best Pricing Solutions

To maintain the first-best nature of marginal cost pricing the monopolist could recover the loss with a subsidy from the government so that he/she could charge marginal cost. If demand alters significantly over short time periods - and a firm uses different production methods to meet demand; or the firm faces capacity limitations - the marginal cost of supply will increase. The monopolist should reflect this in price.[35] Similarly, the government could use subsidisation to meet the revenue shortfall.

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35. For example, electricity supply could use peak-load pricing because the generating company will use cheaper generation sources when demand is low compared to when it is high. Therefore peak-load pricing will recognise this increase as more stations are required to meet demand. For discussion of peak-load pricing see Berg et al., supra, note 8, pp 153-192, and Sherman, supra, note 29, pp 94-108. Sherman discusses the use of peak-load pricing to even out capacity and how price may exceed marginal cost at peak times to encourage consumers with elastic demand to use electricity at off-peak times. Finally, for a comprehensive peak-load pricing discussion see Crew et al., supra, note 30, chapters 3-7.

However, these proposals seem unfair and not socially optimal, because non-consumers pay for the revenue shortfall with their taxes.[36] For this reason other means of funding the deficit have focused on consumers paying an access tariff to make up the loss while still being charged marginal cost for units consumed. In this way the monopolist can retain first-best efficient pricing by using non-uniform "two-part" tariffs.[37]

However, such tariffs could reduce efficiency. This will occur if the flat access rate affects the level of consumption,[38] or if the size of the access fee reduces market participation, especially from those customers wanting only small amounts (this will force remaining customers to pay a higher access fee).[39] Similarly, if there are many consumers the monopolist will have to decide who will pay lower marginal costs and who will pay the higher. While a schedule could do this, it is likely to deviate from the welfare maximum.

Given the limitations of first-best solutions, Sherman suggests that:

> ... if all means of raising money to meet the deficit cause price distortions, with consequent inefficiencies, then the [marginal cost] price itself cannot be efficient and should be raised, so it will share with other available means the task of covering the deficit.[40]

With this in mind the monopolist should consider second-best pricing structures. Obviously these solutions will reduce welfare (area *AEG* in figure 2.6), but are the best achievable given the inefficiencies of above and the constraint of breaking even?[41]

b) Second-Best Pricing

To recover the loss the monopolist could charge every consumer "uniform average cost". While this will eliminate the loss, it may not minimise any allocative inefficiencies brought about by deviating from marginal cost pricing. For this reason "Ramsey prices" price

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36. Sherman, ibid, p 39, for a discussion on social optimality. This occurs when an efficient solution will not be optimal because non-consumers are forced to pay for the cost of consumption. He sees this as being inequitable.

37. Coase R.H., 'The Marginal Cost Controversy,' *Economica,* Vol 13, pp 169-82. Also Berg et al., supra, note 8, for a full discussion of non-uniform two-part tariffs. The financing of the deficit by way of a subsidy or two-part tariff is compared on pp 45-51.

38. Berg et al., ibid, p 107, and Sherman, supra, note 29, p 109, who shows the effect of an income change.

39. Berg et al., ibid, p 106.

40. Sherman, supra, note 29, p 39.

41. Ibid, p 40 and Waterson, supra, note 1, p 18.

discriminate among alternative customers to meet the revenue shortfall while imposing the least loss on society.[42]

The monopolist should discriminate based on each consumer's price elasticity of demand (PED). This measure examines how demand will change following a unit change in price. If demand does not alter, consumers will have perfectly inelastic demand relative to price; while if it leads to an infinite change, consumers will have perfectly elastic demand. In reality the economist does not find these extremes, so must talk about demand curves that are relatively elastic or inelastic when compared to other consumers. Therefore to minimise loss, the monopolist should charge those customers with relatively inelastic demand curves a higher proportion of the revenue shortfall compared to those with relatively elastic curves.[43] The monopolist can also use this criterion to set access and usage fees if two-part tariffs are used.[44]

While theoretically optimal, there are problems associated with the use of Ramsey prices. PED can be difficult to determine between different consumers or consumer groups, and the monopolist may find it impossible to limit lower priced elastic consumers onselling their purchases to higher priced inelastic consumers. When pricing access and usage these problems will compound because the monopolist must use this criterion to set the price of two goods - access and usage. Therefore the inability to perfectly price discriminate may not make Ramsey prices the welfare maximising option.[45]

Partly in response to the problems associated with two-part pricing and the problems with a Ramsey solution, economists have promoted "multi-part pricing". This form of pricing sets access and usage based on demand.[46] For example, a consumer wanting to participate in a market, but not as often as others, will face a lower access fee but a higher usage fee when compared to those consumers who want to participate often. This pricing policy has an

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42. For a full discussion of Ramsey pricing see Sherman, supra, note 29, p 40, 124-144 and Berg et al., supra, note 8, pp 55-90.

43. Zajac E.E., *Fairness or Efficiency: An Introduction to Public Utility Pricing,* Ballinger, Cambridge Massachusetts, p 48. Zajac recognised that pareto-efficiency may not be useful when evaluating the pricing options under second-best criteria because there will always be some winners and some losers from an existing pricing strategy. Instead, he proposed that the gains from winners should be traded off against the losses from losers when moving from one to the other pricing policy.

44. Sherman, supra, note 29, pp 146-149 and Berg et al., supra, note 8, pp 120-122.

45. Berg et al., ibid, p 122.

46. Sherman, supra, note 29, pp 150-153 and ibid, pp 120-122.

advantage over others in that users can select the pricing package that suits them best. Consequently the seller need not require any information about an individual's demand function.[47]

c) Summary

With a global natural monopoly a revenue shortfall will always exist. If first-best pricing solutions create distortions the monopolist should use second-best solutions to eliminate the loss, while at the same time minimising any allocative inefficiencies that result from recovering the loss. These alternatives will vary in success depending on the situation. Before implementing a pricing strategy one should consider the costs of doing so and weigh these costs against the benefits of achieving a more efficient allocative result. Then the monopolist should select the most appropriate *second-best* solution.

The Theory of Second Best

In a partial equilibrium setting marginal cost pricing will maximise welfare; however, this may not hold in a general equilibrium setting.[48] This theory states that if some sectors of the economy price above or below marginal cost, marginal cost pricing should not occur in any given industry because of the distortions created in others.[49]

The difficulty with this theory is that it provides no guidance on what price the monopolist should charge when universal marginal cost pricing does not exist. This has seen the theory refined by conceding the optimality of marginal cost pricing in sectors of the economy independent from ones that do not price in this way.[50] This extension makes the application of marginal cost pricing more acceptable because of the wide variety of instances that are appropriate for a piece meal application. Where this does not occur the monopolist should revert to second-best pricing.

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47. Sherman, ibid, pp 43-46, for a discussion of the theory of self selection.

48. Sharkey, supra, note 4, pp 34-35.

49. Sherman, supra, note 29, p 39, where he discusses the impact of distortions on marginal cost pricing. Also ibid, pp 48-52, for a discussion on the theory of second best.

50. Independence refers to where no substitutes or complements exist for a product or where the monopolist is a major purchaser or seller of inputs.

2.6 Conclusion

This chapter concerned a special type of industry where it was most efficient for one rather than many firms to produce required output. These firms exhibit natural monopoly characteristics.

Cost and demand characteristics provide a guide to determine when a natural monopoly would exist in a single and multiproduct setting. Then I looked at the concept of dynamic efficiency, followed by a more lengthy discussion that focused on the problems of attaining an allocatively efficient output when a natural monopoly, producing on the declining portion of its average cost curve, must break even.

Chapter Three
Why Regulate Natural Monopolies?

3.1 Introduction

In the previous chapter a monopoly was productively efficient when it could supply at least cost. I then considered the conditions for allocative efficiency given that structure. Privatisation allowed the monopolist to maximise productive efficiencies, but liberalisation may not force the monopolist to be allocatively efficient. Inefficiencies will occur if customers are captive to supply - that is, cannot forgo that product or substitute it for another, or barriers prevent entry.[1] Besides this potential for inefficiency, a lack of competitive pressure could lead to productive inefficiencies.[2]

This chapter will determine when competitive pressure will not realise static efficiencies. In this regard I will distinguish the economic concepts of competition "in" and competition "for" a market. This distinction will allow discussion on how barriers to entry will affect competition for a market. From this framework I will determine when governments should regulate to promote efficiency to maximise welfare.[3] Then I will consider the role of regulation in promoting dynamic efficiency.

During this discussion I will not consider whether regulation will be an adequate substitute for competition; I will discuss that issue in section two. Finally, I will also assume that customers are captive to supply.

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1. See Sharkey, *The Theory of Natural Monopoly,* Cambridge University Press, New York, 1982, chapter 3, p 33 for a discussion on welfare loss. Also see Waterson, *Regulation of the Firm and Natural Monopoly,* Basil Blackwell, 1988, pp 13-14, who comments on why regulation may be needed.

2. See Scherer F.M., and Ross D., *Industrial Market Structure and Economic Performance,* third edition, Houghton Mifflin Company, Boston. In chapter 18 the authors discuss the concept of X-inefficiency which refers to production inefficiencies brought about by a lack of competitors forcing the monopolist to be efficient.

3. Waterson, supra, note 1, pp 59-61, for a discussion of allocative efficiency distortions. Also Sherman R., *The Regulation of Monopoly,* Cambridge University Press, New York, 1989, pp 8-9, on regulation to achieve well-being.

3.2 Contestability Theory

Traditionally, economists believed the number of participants in a market determined the ability of a firm to exploit consumers in that market.[4] However, Baumol et al. dispute this claim because they believe competition for a market - that is the potential for entry - rather than competition in that market, will determine the ability of the monopolist to exploit.[5] Such ability will occur when market entry and exit can occur rapidly and where entry and exit incur very little cost. If these conditions exist markets are perfectly contestable. However, when entry barriers prevent entry, these markets are less than perfectly contestable.

Economists have debated what constitutes an entry barrier.[6] Bain of the Mainstream School defines a barrier to be:[7]

> ... the extent to which, in the long run, established firms can elevate their selling prices above the minimal average cost ... without inducing potential entrants to their industry.[8]

While few would argue with this effect, he commented that deviation from the requirements of perfect competition caused barriers to rise.[9] Others do not share this view and take a narrower stance. Stigler of the Chicago School suggests a barrier exists when entrants incur costs that established firms do or did not have to bear;[10] in other words, the only barrier in the Chicago setting would be legal prohibitions that force costs above the incumbents.[11]

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4. See Bain J.S., *Industrial Organisation,* second edition, John Wiley & Sons, New York, 1968.

5. Baumol W., Panzar J., and Willig R., *Contestable Markets and the Theory of Industry Structure,* Harcourt Brace Jovanovich, San Diego, 1982.

6. See Brock W.A., and Evans D.S. ed., 'Predation: A Critique of the Government's Case in *US v AT&T,*' in *Breaking Up Bell: Essays on Industrial Organization and Regulation.,* North-Holland, New York, 1983, pp 44-45.

7. The Mainstream School believes that an industry structure determines the conduct of firms within an industry. Such conduct, in turn, determines industry performance in the long run. Therefore, in an industry with few firms, those firms would engage in conduct to maximise profits. Antitrust law should promote entry to limit an incumbent's ability to monopolise price.

8. Bain, supra, note 4, p 252.

9. Bain J.S., 'Conditions of Entry and the Emergence of Monopoly,' pp 219-227, in Chamberlin E.H. ed., *Monopoly and Competition and their Regulation,* MacMillan & Co Ltd, London, 1954. For example, if existing firms have an absolute cost advantage over those entering, their product has a differentiated advantage over the new product, if economies of scale prevent entry or there are legal prohibitions on entry; barriers to entry exist.

10. The Chicago School do not believe a link exists between structure, conduct and performance. Instead, industry structure will tend toward being efficient in the long run. That structure will not determine industry performance because entry and output expansion will prevent exploitation.

11. Stigler G., *The Organization of Industry,* Richard D Irwin, Homewood, 1968, pp 67-70. Also see Demsetz H., 'Two Systems of Belief About Monopoly,' in Goldschmid et al. eds., *Industry Structure, Market Rivalry, and Public Policy, Journal*

Therefore we can say that barriers create an obstacle to entry, but what constitutes a barrier depends on your school of thought. This will, in turn, determine the perceived difficulty of entry.[12]

When related to the theory, sunk costs are entry barriers. They are barriers because the entrant cannot recover the expenditure on exit, so must recover these costs with profit.[13] Entry will, however, force profits to fall because the entrant will have increased industry output, therefore to maximise profits the entrant should seek to avoid sunk costs. But often he/she will not have the choice because entry will depend on this expenditure. For this reason sunk costs create a difference between the entrant and the incumbent.[14] Besides sunk costs, the entrant's success will depend on the speed at which he/she can enter. If the entrant cannot enter immediately the incumbent could react strategically by, for example, predatory pricing. The incumbent could also maintain pre-entry output levels or adjust price to a normal profit level to leave little room for the entrant in the market.

Given the existence of barriers, one must assess how well less than perfect contestability works in the market. Strassmann addressed this question by looking at contestability in the commercial airline industry.[15] Before her study some economists thought the industry would meet the theory's requirements, as aeroplanes were not a sunk investment because their owners could shift them to markets of above normal profit. Her results did not show this because she found positive profit rates in the industry[16] - a conclusion confirmed by other studies that have

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of Law and Economics, vol 16(1), April 1973. He argues that barriers to entry only occur when governments perceive them as socially desirable.

12. See Schmalensee R., 'Ease of Entry: Has the Concept Been Applied too Readily?,' *Antitrust Law Journal,* no 1, 1987, p 44. Also see Ordover J.A., and Wall D.M., 'Proving Entry Barriers: A Practical Guide to the Economics of New Entry,' *Antitrust,* Winter 1988, p 12.

13. See Reserve Bank of New Zealand, 'Contestable Market Theory: A Review,' *Reserve Bank Bulletin,* vol 50(1), pp 5-8, March 1987. The Bulletin outlines how sunk costs create barriers to entry. It explains *'The incumbent has already spent money on sunk costs, and can consequently ignore those costs in assessing the best response to the threat of entry. The prospective entrant, however, faces the choice of whether or not to spend money on sunk costs. It appears, therefore, that incumbent firms have a direct incentive to increase barriers to entry through advertising, research and development, etc., because the building of such barriers allows increased profits'.*

14. For example, consumers may have no information about the product because no money has been spent on advertising while the entrant may have to purchase specialized capital equipment. Therefore these costs are unavoidable which could make a firm reluctant to enter because they are unrecoverable on exit.

15. Strassmann D.L., *Contestable Markets and Dynamic Limit Pricing in the Deregulated Airline Industry: An Empirical Test,* Rice University, February 1986.

16. While rapid redeployment could occur, profits were high because of the need to gain airport landing rights. These rights, it has been claimed, were a barrier to entry.

found profits to correlate based on market participation.[17] Therefore it would seem that relaxing the theory's assumptions will not work.[18] Baumol comments:

> So when assessing the level of market contestability consideration should be given to the extent the requirements hold, and how those requirements effect the behaviour of the incumbent.[19]

From these observations I will, when assessing regulatory requirements, assume that there are no statutory barriers to entry. I will also assume there are constant technology levels and customers are captive to supply.[20]

3.3 Regulating a Natural Monopolist

In this section I will determine when governments should regulate to maximise allocative efficiency and protect the productively efficient monopoly structure against entry. I will perform this analysis for a global and local natural monopoly, but will not distinguish between a single and multiproduct firm. I will then discuss how cross-subsidisation could promote inefficient entry, then how the monopolist could use monopoly power to affect the operation of "competitive" markets.

Global Natural Monopoly

In a global setting I will first consider the need for regulation in a perfectly contestable setting; then regulatory requirements when entry barriers rise. Throughout this discussion I will assume that the monopolist will break even in the long run.

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17. See Bailey E., Graham D., and Kaplan D., *Deregulating the Airlines,* MIT Press, Cambridge Massachusetts, 1985.

18. This conclusion provides support for the theory's critics who argue it inconsistent and that its assumptions are too abstract for it to apply in a competition policy setting. See Shepherd W.G., '"Contestability" v. Competition,' *American Economic Review,* September 1984, pp 572-587. Also Greer D., 'Contestability in Competition Policy: Replacement, Supplement, or Impediment?,' in Bollard A., *The Influence of United States Economics on New Zealand: The Fulbright Anniversary Seminars,* NZIER Research Monograph 42, Wellington, 1988. For contrary opinion see Harrison G.W., 'Experimental Evaluation of the Contestable Markets Hypothesis,' in Bailey E.E. ed., *Public Regulation: New Perspectives on Institutions and Policies,* The MIT Press, Cambridge Massachusetts, 1987.

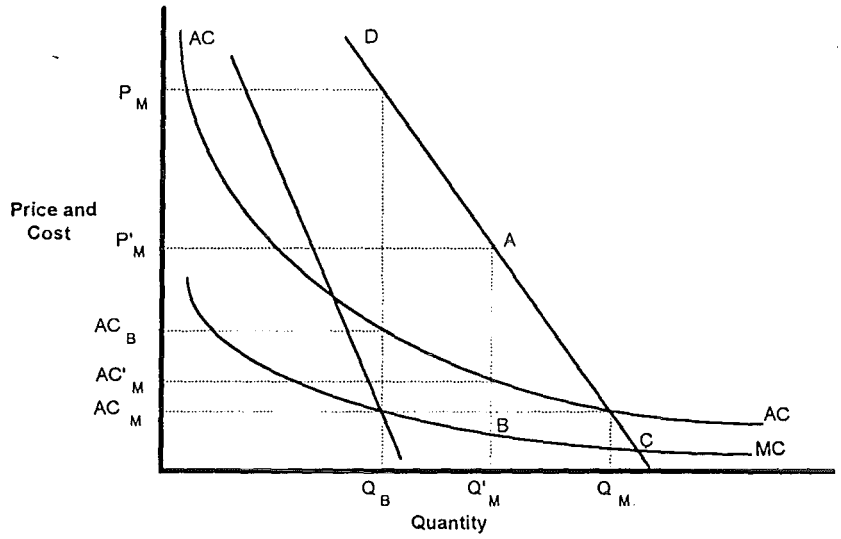
19. See Baumol W.J., and Willig R.D., 'Contestability: Developments Since the Book,' in Morris D.J. et al. eds., *Strategic Behaviour and Industrial Competition,* Clarendon Press, Oxford, 1986. Also Schmalensee, supra, note 12, pp 41-51, and Sharkey, supra, note 1, p 152.

20. Waterson, supra, note 1, pp 136-139. See for a discussion on increasing market contestability.

a) Perfect Contestability

With perfect contestability, entry will occur if the monopolist prices above cost; such entry will drive industry price [P_m] toward the competitive level [AC_m].[21] Of course industries that have natural monopoly characteristics cannot support two firms in the long run, so the less cost efficient firm will exit the industry as competitive pressures force both firms to move down their average cost curves in search of the least cost form of production. Once found, the remaining firm will earn normal profits at price AC_m. In this environment the Government should not limit entry because the threat prevents the monopolist pricing above average cost. The Government should reach this conclusion irrespective of demand alterations.

Global Natural Monopolist



(figure 3.1)

b) Non-perfect Contestability

When entry barriers rise, the threat of entry becomes less real to the monopolist.[22] Entry then depends on the extent to which established firms have priced above the level that deters entry and whether profits from entry will cover sunk costs. For example, if sunk costs create an entry barrier [plain P_m'A] the monopolist could use the barrier to maximise profits at price P_m' in figure 3.1. Pricing above that level would entice entry but would not below that level

21. See Berg S.V., and Tschirhart J., *Natural Monopoly Regulation: Principles and Practice*, Cambridge University Press, New York, 1988, pp 30-31. Also Sherman, supra, note 3, pp 77-81; Waterson, supra, note 1, pp 26-36 and Sharkey, supra, note 1, pp 86-90.

22. Waterson, supra, note 1, pp 31-36; Berg et al., ibid, pp 28-30.

because sunk costs will make it unprofitable to enter. Therefore allocative inefficiencies will result at price P_m' that will, in turn, lessen producer and consumer surplus [area ABC].

Sunk costs are but one barrier to entry because if the incumbent can anticipate entry he/she could lower prices to avert full entry. This ability will allow the monopolist to price at P_m in the long run, but when entry threatens, move to price P_m' (assuming sunk barriers exist). This move will eliminate entry in the short-run.[23] In this environment the Government should use regulation to limit set price at AC_m. Such regulation will be Pareto-efficient because it will eliminate the welfare loss.

Local Natural Monopoly

Again this discussion will initially consider the need for regulation in a perfectly contestable market, then regulation when entry barriers rise. Then I will consider what pricing strategy the monopolist should follow given that marginal cost pricing will cause "excess" profits. Until this point I will use average cost as a proxy for marginal cost when assessing lost welfare.

a) Perfect Contestability

With perfect contestability in a local setting entry will occur irrespective of the monopolist profiting. Although contestability will prevent the monopolist taking profits, in a similar manner to the global monopolist (see figure 3.1), there is potential for inefficient entry even when the price charged by the monopolist equals the cost of production, price AC_m in figure 3.2.[24] For example, at AC_m firm A could enter and supply Q_a at price AC_a to undercut the monopolist. This entry would be inefficient because another firm would have to produce remaining output, distance Q_a to Q_m, at a greater cost [AC_b].

Given that this may occur, there are two possible methods of controlling entry. The first would require any entrant to produce the entire market demand, Q_m;[25] while the second option

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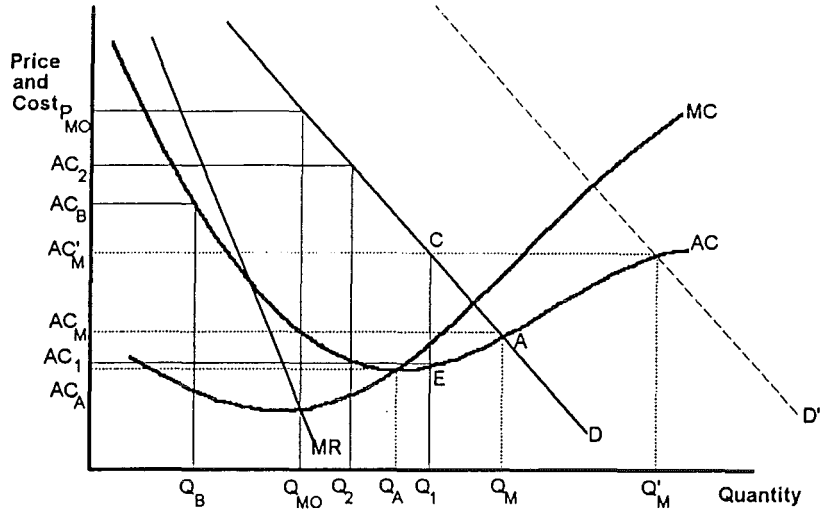
23. See Panzer J.C., and Willig R.D., 'Free Entry and the Sustainability of Natural Monopoly,' *Bell Journal of Economics,* vol 8, 1977, pp 1-22 and Berg et al., supra, note 21, p 246.

24. See Faulhaber G.R., 'Cross Subsidization: Pricing in Public Enterprises,' *American Economic Review,* vol 65, pp 966-977; Sharkey, supra, note 1, pp 86-90; Waterson, supra, note 1, pp 26-31; Sherman, supra, note 3, pp 80-82 and Berg et al., supra, note 21, pp 31-33.

25. Berg et al., supra, note 21, p 32, and Sherman, supra, note 3, p 82.

would prevent entry by limiting entry. The Government should select the first option because limiting entry would require additional regulation to limit the monopolist maximising profits. If entry was limited, however, the Government should set price and quantity because if it set price alone [AC_m] the monopolist could maximise profit by producing Q_{no} instead of Q_n.

Local Natural Monopolist



(figure 3.2)

Given that the Government should limit entry, it should monitor demand alterations to ensure production efficiency. For example, if demand altered from D to D', two firms could produce output Q_m' more efficiently than one (ie. both produce Q_a). In this case the Government should not restrict entry.

b) Non-perfect Contestability

When entry barriers rise, this will deter entry to the extent that profits do not cover sunk investment costs.[26] In this regard regulatory options will differ depending on the scale of entry barrier. For example, if the barrier enabled the monopolist to produce Q_1 at price at AC_m', the Government should control entry and eliminate the welfare loss (ACE) by forcing price to AC_m. If the barrier allowed price AC_2, firm A would not enter the market because profits would not cover sunk costs. Therefore regulation should force the incumbent to price at AC_m, a move requiring regulation to control entry.

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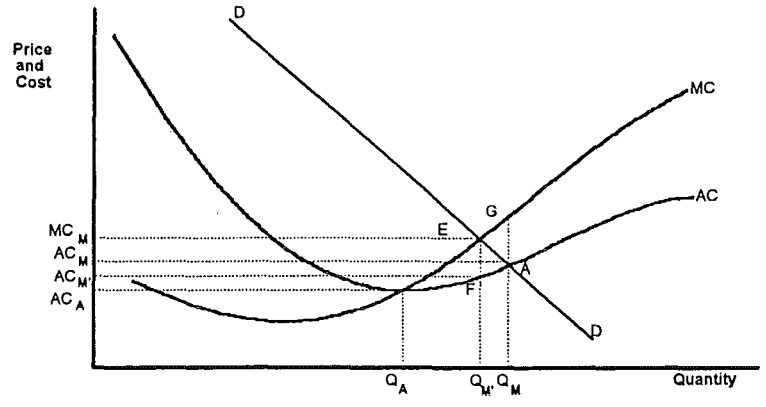
26. Waterson, supra, note 1, pp 31-36 and Berg et al., supra, note 21, pp 28-30.

When faced with a local natural monopolist, the Government must control entry to sustain efficient production. With perfect contestability, regulation requiring entrants to produce entire output rather than a portion will be preferable to limiting entry per se because of the need for additional regulation to limit profits. This principle will apply if barriers rise, but the Government must extend control to the incumbent because an incentive will exist to maximise profits by charging a price between AC_m and P_{mo}. This control will regulate entry and profitability, but will be preferable to separate profit and entry regulation.

c) Excess Profit

Regulation has the objective of mimicking the operation of a competitive market when imperfections prevent that market from maximising welfare. With a global natural monopoly, pricing where supply equals demand creates a loss; however, in a local setting marginal cost pricing will create super-profits [area MC_mEFAC_m'], which will entice entry if the production of total output is the only entry restriction.

Marginal Cost versus Average Cost Pricing of a Local Natural Monopoly



(figure 3.3)

With price at AC_m over-consumption will occur, distance Q_m-Q_m', because '*consumers [will] value the additional output less than the value of the additional resources in other activities*', which will cause a welfare loss represented by the area AEG.[27] Regulation should

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27. Berg et al., supra, note 21, p 30, see footnote 5 in the Berg text.

eliminate this loss, but output restrictions will not limit inefficient entry. Therefore regulation should limit entry and require the incumbent to produce at the competitive level and sell at marginal cost. This solution would not change if the market was less than perfectly contested, except if demand cut the average cost curve at its minimum. Then there would be no need for regulation.

Cross-Subsidisation

Besides an unsustainable local monopoly, cross-subsidisation between two monopoly products could be unsustainable. A cross-subsidy exists when a natural monopoly prices one product below cost, while to recoup this loss the monopolist will price another above cost (see appendix two for an example).[28] This practice will be unsustainable when perfect contestability exists, because it will result in inefficient entry in the market where collection occurs. The threat of entry will not allow the monopolist to cross-subsidise so the Government should regulate. However, without perfect contestability the monopolist can sustain cross-subsisation so as to maximise profit.[29] In this case the Government should regulate to force the monopolist to price at no less than marginal cost.

Monopoly Leveraging

To date I have implicitly assumed that if a multiproduct natural monopolist exists it does so only in the monopoly market and not in markets with competitive potential - in other words markets where one firm will not produce output at least cost. If this mix exists, and if competitors cannot compete without goods, service or access to the monopoly's facilities, the monopolist could extract profits from the competitive market by foreclosing supply to competitors; discriminating against competitors; or actively seeking to limit competition. This strategy has the objective of extending the monopoly.

Of course the extent to which this ability will be of concern will depend on whether the monopolist can extract profits in both markets. To this end:

> ... there [are] a well known set of conditions - those under which 'you can only earn your monopoly profit once' - in which vertical integration does not give rise to a welfare loss. The requirements are that inputs

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28. Waterson, supra, note 1, p 19, he comments on this flexibility but states that some of these options are more preferable than others.

29. Sherman, supra, note 3, pp 65-67, he discusses that a monopoly may maximise profits by using Ramsey criteria to price discriminate between consumers with different demands.

> in the downstream activity are used in fixed proportion, that monopolisation of the downstream activity will not raise the costs of entry [essentially a contestability issue] in to the upstream activity.[30]

If these requirements do not hold the monopolist could distort competitive market operation. Distortion would not occur in a perfectly contested monopoly market because profit taking would entice entry. If, however, the monopoly was not contestable, and the requirements did not hold, regulation should prevent the potential to profit in the competitive market. Of course the degree of contestability will differ depending on whether the natural monopoly was facility or product based. If product based a competitor could meet exploitation by sourcing product from overseas - a possibility that does not exist with a facility.

Summary

Regulatory options differ depending on whether an industry exhibits global (strong) or local (weak) natural monopoly tendencies, and whether perfect market contestability (no entry barriers) exist in an industry. In a multiproduct setting the monopolist's ability to cross-subsidise or leverage competitive markets could also determine regulatory response. Therefore regulation will depend on circumstance with monopoly options summarised in the following table. Competitive access to monopoly markets will also be of concern.

Appropriate Regulatory Policies for a Single Product Natural Monopolist

		No barriers to entry	
Type of monopoly	Barriers to entry	Sustainable	Not Sustainable
Strong natural monopoly (MC pricing creates deficits)	(1.1) Regulate to deviate from MC pricing to eliminate the deficit and to avoid monopolistic prices.	(1.2) Do not regulate. Allow threat of entry to force break-even prices.	(1.3) Regulate to deviate from MC pricing both to eliminate deficits and to avoid monopolistic prices, while disallowing entry.
Weak natural monopoly (MC pricing allows nonnegative profits)	(2.1) Regulate to enforce MC pricing and address "problem" of excess profits.	(2.2) Do not regulate. Allow threat of entry to force MC prices.	(2.3) Regulate to enforce MC pricing and address "problem" of excess profits, while disallowing entry.

(table 3.1)[31]

30. Geroski P., Thompson D., and Toker S., 'Vertical Separation and Price Discrimination: Cellular Phones in the UK,' *Fiscal Studies*, vol 10(4), November 1989, p 89.

31. Berg et al., supra, note 21, p 34.

3.4 Regulation to Achieve Dynamic Efficiency

Dynamic efficiency will occur in a perfectly competitive environment because competitors will seek cost advantage over rival firms. However, such efficiency may not occur when only one firm exists in a market. This section will examine the need for regulation to achieve dynamic efficiencies in a perfectly contested, then less than perfectly contested market. The issue of global or local characteristics will not affect these results because the static regulatory framework discussed in the previous section indicated when a need existed for entry limitation.

Perfect Contestability

Perfect contestability forced a monopolist to achieve static efficiencies. This will occur with dynamic efficiency because contestability will force incumbent firms to invest in technology that minimises cost. If this does not occur entrants will develop this technology and enter. Therefore the Government should not regulate.

Non-perfect Contestability

Entry barriers cause static inefficiencies because of a limitation on entry. This same limitation provides little incentive for the incumbent firm to find the equilibrium level of investment. Although some investment will occur, regulation must force monopolies to find that level.

3.5 Conclusion

In this chapter we have seen that under certain circumstances the Government should not regulate, while in others regulation should protect a monopoly structure or limit the monopolist from profit taking. I reached these conclusions by analysing a static environment in which contestability altered from being perfect to non-perfect.

Following those recommendations my attention switched toward regulation to achieve dynamic efficiencies, where I found that regulation depended on the level of market contestability. Regulation, therefore, provides a valuable tool to promote efficiencies.

Section Two
Regulatory Overview

In section one we saw that the New Zealand Government commercialised and liberalised the economy to make it more efficient. The section also showed that without intervention some "natural monopoly" industries could exploit consumers or competitors without fear of entry or could, on the other hand, be vulnerable to entry irrespective of whether exploitation occurred. For these reasons regulations were promoted as a mechanism to achieve economically efficient outcomes when the market failed to achieve these results.

However, this section did not consider the possibility that regulation may not mimic the competitive market. For example, regulation will often be a less than perfect substitute for the competitive market because regulating bodies will not have perfect information on which to make "efficient" decisions. Similarly, regulation will be a costly method of achieving efficiencies so any gain must cover the cost of control.[1] Hahn et al. explain:

> ... it is imperative to assess carefully the benefits and costs of these regultation in order to allow politicians and bureaucrats to make more infomred decisions. Moreover, it is important to understand exactly what factors are included in different types of estimates of the costs and benefits of regulation.[2]

Beside cost, regulation could even provide an incentive for a firm to act inefficiently.[3] For these reasons governments should limit the use of regulation by instead using competitive pressure - even if that pressure is imperfect in itself.[4]

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1. See Berg S.V., and Tschirhart J., *Natural Monopoly Regulation: Principles and Practice,* Cambridge University Press, New York, 1988, p 27. These authors discuss the possibility of weighing the cost of regulation against the area of super normal profits. They do this because our objective when instigating regulation should not be to make value judgements on whether consumers value their surplus more than producers.

2. Hahn R.W., and Hird J.A., 'The Costs and Benefits of Regulation: Review and Synthesis,' *The Yale Journal of Regulation,* vol 8, 1990, pp 233-278, at 235. The authors then go further to provide a methodological framework for measuring the cost and benefits of regulation. They then apply this framework to various industry and social types of regulation.

3. For example, see Averch H., and Johnson L.L., 'Behaviour of the firm Under Regulatory Constraint,' *American Economic Review,* vol 52(6), 1962, pp 1059-69.

4. See Kahn A., 'Deregulation: Looking Backward and Looking Forward,' *The Yale Journal of Regulation,* vol 7, 1990, pp 325-354, at 340. Kahn comments: *'wherever even quite imperfect competition is feasible, it is superior to command-and-control regulation'.*

Regulatory imperfections exist because governments have inadequate information upon which to make decisions.[5] Consequently the Government will find it difficult to determine whether a natural monopoly exists, let alone whether that monopoly was local or global.[6] Therefore it should use the market rather than limiting entry to determine when a natural monopoly exists because in a global setting entry may occur in the short-run, but two firms could not possibly survive over a longer period. Similarly, the Government should not limit entry in a local setting because it:

> ... amounts to an argument that if we knew we had a natural monopoly (which we do not know) and if a natural monopoly had adequate incentives to innovate (which it may not), given effective profit regulation, and if a regulated monopoly could be relied upon to price efficiently (which historically it did not), then regulated (and in some case closed) monopoly would be more efficient than alternative modes of organisation.[7]

For these reasons entry was not limited because although liberalisation could cause inefficient entry, efficiencies caused by competition will outweigh these losses because the monopolist would face increased pressure to be allocatively, productively and dynamically efficient.[8] Therefore I will not consider the possibility of limiting entry because of the difficulty in distinguishing a global from local monopoly Similarly, I will not discuss the limitation entry because restricting entry contravenes the Government's policy of liberalised markets.

Given that governments should fully liberalise natural monopoly markets, there is potential for a global natural monopoly to be inefficient. While privatisation will provide the monopolist with increased incentive for productive and dynamic inefficiencies,[9] this incentive will also give the monopolist the ability to distort the operation of monopoly markets or markets that rely on access to the monopoly in order to compete.[10] For these reasons

5. See Sappington D.E.M., and Stiglitz J.E., 'Information and Regulation,' in Bailey E.E. ed., *Public Regulation: New Perspectives on Institutions and Policies,* The MIT Press, Cambridge Massachusetts, 1987, pp 3-44.

6. See Evans D.S. ed., and Heckman J.J., 'Natural Monopoly,' in *Breaking Up Bell: Essays on Industrial Organization and Regulation,* North-Holland, New York, 1983, pp 135-140.

7. Haring J., *Implications of Asymmetric Regulation for Competition Policy Analysis,* FCC Office of Plans and Policy Working Paper No 14, 1984, pp 22-23.

8. See Cave M., *Recent Developments in the Regulation of Former Nationalised Industries,* Treasury Working Paper No 59, London, August 1991, pp 7-8. Also Cave M., 'Regulating Competition in Telecommunications: British Experience and its Lessons,' *Economic Analysis and Policy,* vol 21(2), September 1991, pp 129-143 at 129-133. And Ng Y.-K., 'Should a "Natural Monopolist" be Subject to Competition? With Special Reference to Cellular Mobile Telephone Services in Australia,' *The Australian Economic Review,* 2nd Quarter 1991, pp 32-44 at 34-35.

9. See Jennings S., and Cameron R., 'State-Owned Enterprise Reform in New Zealand,' in Bollard A., and Buckle R., ed., *Economic Liberalisation in New Zealand,* Allen and Unwin/Port Nicholson Press, Wellington, 1987, p 121.

10. Stelzer I.M., *A Few Modest Proposals for Regulatory Reform, With Reference to the British Experience,* Putnam, Hayes & Bartlett, Inc., New York, p 9. The author was of the belief that *'where competition works, regulatory reform is easy to devise, stop regulating'.* Then if competitive pressure did not work governments would have to consider regulation. Also see OECD, *Utility Pricing and Access: Competition for Monopolies,* OECD Publications Service, Paris, 1991, p 12. This

governments should consider regulating the monopolist to prevent allocative distortions in the monopoly market, and productive, dynamic and allocative distortions in competitive markets.

Although inefficiencies could result, they may not if the monopolist does not have the power to affect market operation. The monopolist will not have this power if the market in which he/she operates is contestable; consumers can forgo or substitute the monopoly product; or if competitors can source product internationally. While the first of these features will occur with any monopolist, the last will not occur with a facility based monopoly. For this reason I limit discussion in my thesis to facility based monopolies.

When selecting regulation to control the monopolist, the Government should select policy consistent with its over riding objectives. However, consistency will essentially involve a trade-off between conflicting objectives. On one hand the Government does not want to regulate because it could create similar distortions to those found under the previous "interventionist" regime, but on the other, not regulating will enable the monopolist to exploit a dominant position and so lessen efficiencies. Therefore a consistent approach would minimise the use of regulation and maximise the use of "competitive" negotiation to promote efficiency. For this reason the government should promote negotiation by using "light-handed" regulation to force, rather than explicitly prevent, the monopolist from using that power. Obviously when implementing these policies the government should seek net benefits from regulation. These benefits will see the government pay less attention to organisations with minimal market power, while those with more should be subject to greater scrutiny. The extent to which an organisation will retain that power in the future should also be of concern when setting policy.

While the Government should first use light-handed regulation, if the monopolist disregards this directive, consideration should be given to more explicit forms of regulation. In assessing the appropriate policy response Bob Anderson commented:

> Only if the natural monopoly problems appear to be serious do I even want to consider some of these regulatory options. I don't want to go looking for a regulatory solution to problems that really aren't important. There's an old saying 'if it ain't broke don't fix it', and I don't want to try to fix a problem that doesn't exist.[11]

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report comments: *'competition is ultimately the most desirable form of market discipline. Absent competition, both pricing of and access to monopoly utility services should be regulated in a way to simulate the effects of a competitive market'*

11. Anderson B., 'Market Dominance - Issues and Options, Comment,' *State Owned Enterprises: Privatisation and Regulation - Issues and Options*, Institute of Policy Studies, Seminar, Session Two, 14 September 1988, p 24.

If the Government requires regulation, it has a number of options. Obviously the threat of regulation and antitrust law are consistent with the over riding deregulatory policy because they should force compliance before the need for further steps. If "light-handed" regulation does not work, the Government should promote efficiency by considering price control and legislation that ensures facility access. These moves will, however, be second best in that they will depart from the goal of regulatory minimisation. They may even create a need for additional forms of regulation to support the initial move.[12]

To minimise the extent of explicit regulation, the Government has other options apart from liberalisation. First, it could ensure facility access by separating the monopoly part of the organisation from parts with competitive potential so that the monopoly would have no incentive to discriminate between alternative suppliers. Separating the monopoly part into smaller units will promote competition in monopoly markets because alternative suppliers could compete with others for consumers. These separations, in effect, acknowledge that regulation will always provide a second-best alternative to competition when promoting efficiency. In this regard Littlechild states:

> Competition is indisputably the most effective means - perhaps ultimately the only effective means - of protecting the consumers against monopoly power. Regulation is essentially a means of preventing the worst excesses of monopoly; it is not a substitute for competition.[13]

While there will be obvious benefits from splitting an organisation, one should not lose sight of its costs. Separation may well net total efficiency losses; therefore should not be considered. If, however, there are net gains, and these gains exceed those brought about from regulation, the government should consider separation. Only that comparison will determine the optimal regulatory path.

The purpose of this section will be to examine the regulatory options open to the Government given an objective of efficient resource allocation. Chapter 4 will look at the use of regulatory threats, while chapter 5 will discuss the current antitrust provisions of the Commerce Act and consider the potential for amendment. Following that, chapter 6 will look at the "heavier-handed" technique of price control while chapter 7 will discuss the issue of structural separation.

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12. Martin G., *Aspects of the Regulation of Natural Monopolies,* Treasury Working Paper, 1992, p 19.

13. Littlechild S.C., *Regulation of British Telecommunications' Profitability,* HMSO, London, 1983, para 4.11.

Chapter Four
The Threat of Regulation

4.1 Introduction

The Government can use a regulatory threat as an active policy variable in its regulatory framework.[1] If active, the threat should give firms - either by itself or in unison with other regulatory devices - sufficient incentive to price based on cost; allow competitors fair and reasonable access to facilities should their own negotiations fail; and prevent monopolists using dominance for their own gain. A threat represents a light-handed form of regulation, because to avoid intervention a dominant party must act in a way that will promote rather than hinder efficiency. Ratner explains:

> In short, [light-handed regulation] is hoping that the dominant player will operate in a "reasonable" (ie. non-monopolistic) manner in order to avoid the threat of government regulation in the future.[2]

This chapter will examine the potential advantages and disadvantages a threat has over heavy-handed regulation. Then I will examine how the Government could relay a threat to the market, then examine mechanisms by which it could determine whether the threat was successful. After that I will look to see when firms will regulate themselves, followed by a section examining the options open to the Government should they decide not to conform.

4.2 The Threat of Regulation

The Government could use a threat as the sole method of regulation, or use it as only part of its regulatory umbrella. By threatening to regulate, the Government seeks to restrict the ability of the monopolist to exploit consumers and provide incentive for the monopolist to

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[1]. See Anderson B., 'Market Dominance - Issues and Options, Comment,' *State Owned Enterprises: Privatisation and Regulation - Issues and Options,* Institute of Policy Studies, Seminar, Session Two, 14 September 1988, Regulation: Policy Issues and Options, p 25.

[2]. Ratner P., *International Private Sector Perspective,* NZIPA Seminar on Competition Policy in New Zealand, 27 February 1992, p 28.

negotiate access agreements (ie. use the market system) on an equal footing with competitors. In other words, a threat seeks to maximise the use of the competitive market by "levelling the playing field" so that market dominance will not create inefficiencies.

The development of agency theory has led to the increased use of a threat over more explicit forms of regulation. Agency theory suggests that when there are two parties in a relationship, the interests and objectives of a party could diverge from what the other party requires. If the objectives do diverge, the principal to the relationship could take action that would make the agent conform to the principal's interests and objectives.[3] For example, in a regulatory environment the Government - the principal in this case - will want the firm - the agent - to act as if it were in a competitive market.[4] The firm, on the other hand, will want to maximise profit. The Government can limit this potential by threatening to regulate.

Besides the Government as principal, other parties could influence a firm's behaviour.[5] For example, if the firm pays too much attention to the wishes of the Government, company shareholders may register their disapproval by selling their shares - a move that would leave the company's management vulnerable to corporate take-over because of the reduction in share value. Not all groups will share this view because customers, input suppliers and new entrants, will generally side with the Government for they will not want the monopoly to exploit its dominant position.

Simply having differing objectives will not force the firm to comply. For this to happen these groups should monitor the firm's actions. Monitoring will allow interest groups to detect deviations from their objectives. These groups will also inform the Government of any "alleged" use of a dominant position. The Government's threat, in turn, can benefit, amongst others, competitors because it will help them negotiate agreements on an equal footing with the monopolist rather than have the terms of agreement dictated by the monopolist. However, the threat will only do this if:

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[3]. Jensen M.C., and Meckling W.H., 'Theory of the firm: Managerial Behaviour, Agency Costs and Ownership Structure,' in Smith C.W., ed., *The Modern Theory of Finance,* 2nd Edition, McGraw-Hill, 1990. The authors develop this theory to explain the relationship between the owners and managers of a firm. Applying this theory to a regulatory setting advances the theory further by recognising that where no ownership links exist between Government (or other parties for that matter, excepting shareholders) and a firm, the Government can still influence the behaviour of a firm. See Vickers J., and Yarrow G., *Privatisation: An Economic Analysis,* MIT Press, Cambridge Massachusetts, 1988, p 92.

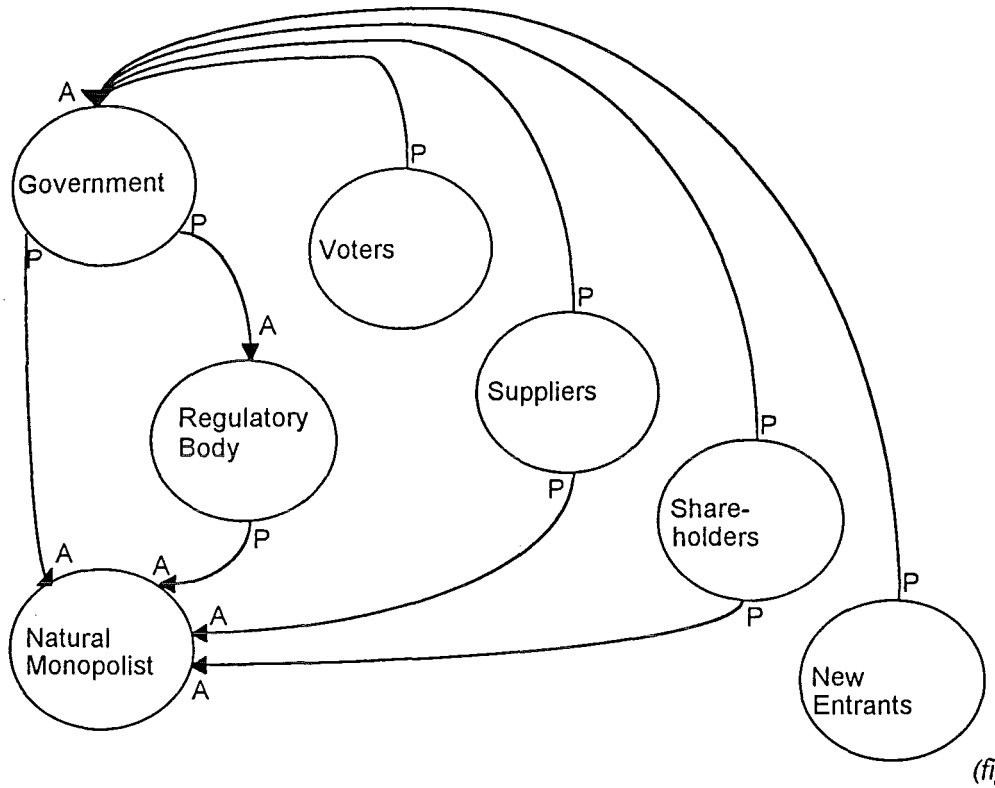
[4]. See Crew M.A., and Kleindorfer P.R., *Public Utility Economics,* The Macmillian Press Ltd, London, 1979, pp 129-132.

[5]. Ibid.

> ... regulation would be costly to [an organisation, if so] it will have incentives to avoid it and "buy off" those groups that would otherwise pressure government to introduce regulation. These incentives will reduce the scope for [it] to exercise market power.[6]

So while a principal of the firm, the Government will act as agent to these other parties because the parliamentary system represents their interests. See figure 4.1.

Principal - Agent Relationships in a Regulated Setting



(figure 4.1)

The objectives of these "other" parties and those of the Government will not always coincide. This could lead to these groups (or sub-groups) adversely influencing the policy of the Government. Such influence will most likely occur from organised parties or parties holding a large number of votes, which could see policy selection deviate from the over riding goal of efficiency.[7] Jarden Morgan considered the potential for interest group pressure in their report to Telecom on privatisation. They comment that:

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[6]. See Jarden Morgan NZ Limited, *Regulatory Issues Relating to Privatisation,* Report for Telecom Corporation of New Zealand, August 1989, pp 38-39.

[7]. See Electricity Task Force Report, *Structure, Regulation and Ownership of the Electricity Industry: Report of the Electricity Task Force,* Government Printer, Wellington, September 1989, p 53. The report states that the threat of regulation could result in *'less efficient pricing structures, as the dominant firm can set prices in order to avoid political intervention'.*

> Interest groups will attempt to use the political process to obtain the regulatory regime (including no explicit regulation) that provides the greatest benefits for themselves. Politicians will have incentives to respond to those groups that will deliver the maximum number of votes. ... The theory predicts that government regulation tends to protect producer groups or those industries that are being regulated (because it is less costly for them to organise) at the expense of consumers who are less likely to be organised.[8]

However, just because interest groups can lobby the Government does not mean policy will reflect their interests, because the extent of adoption depends on how the Government sets policy. The least potential for divergence exists if a small "elitist" group of cabinet set policy because, providing this group follows the overriding objectives of the Government, interest groups will have less access to policy formation (this was the case in New Zealand during the mid 1980s, see chapter one). However, if less elitist groups form policy a greater potential for divergence exists because a consensus "corporatist" styled grouping will have input from a wide variety of "vested-interest" groups.

If interest groups do not adversely influence a threat, it has advantages over more explicit forms of regulation because it avoids the costs of regulation. These costs are represented by the direct costs of setting up and administering the regulation; they are also represented by the indirect costs that result because of the regulation. These costs include the potential that an explicit control will cause allocative, productive, and dynamic inefficiencies; alter a firms incentive structure; and provide a mechanism by which governments can promote social over "efficient" economic objectives. Similarly, the effectiveness of a more explicit regulatory regime will depend on the level and quality of information the regulator has available to control. For this reason effective control will not be possible because the regulated firm has an incentive to distort that information (for further discussion on explicit forms of regulation see chapter 6).[9] Because of these reasons a threat will give an industry better incentive to act efficiently. It will also give that industry greater flexibility to respond efficiently to changing market conditions and allow the government to obtain more information on which it could base more stringent controls.[10] Finally, a threat will prevent industry regulators being "captured" to benefit industry at the expense of the public.[11]

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[8]. Jarden Morgan, supra, note 6, p 29.

[9]. For discussion on costs see Electricity Task Force, supra, note 7, pp 51-52.

[10]. Ibid, p 53. Also Jarden Morgan, supra, note 6, p 46. Jarden Morgan concur with the findings of the Task Force when it comments that *'the threat allows the industry greater flexibility to develop in the way that is most efficient, unconstrained by imposed rules. It may enable dynamic efficiencies to be more readily achieved'*.

[11]. For discussion on Capture Theory see Stigler G., 'The Theory of Economic Regulation,' *Bell Journal of Economics and Management Science*, vol 2, Spring 1971, pp 3-21.

Given these advantages, the effectiveness of the threat will depend on the response the firm has to it. If we assume a firm will maximise profit, we would expect that firm to take advantage of its dominance to the level that will avoid government intervention. In other words, there will be a game where participating parties will respond to the actions of others, both now and in the future, to maximise their own objectives. The Electricity Task Force explains this potential:

> [The] dominant firm may push against the implicit constraint of regulation to determine what it can get away with. Consequently, the likely behavioural response of the dominant firm to the threat becomes important. It involves a strategic game between the Government and company involved. There is a tendency to think only of the first two steps of the game, namely the Government's implicit or state objectives and the company's short term response. However, the "Regulatory Game" evolves over time as experience on reactions is recorded, and as the Government's agenda and the firm's interests change.[12]

The rules of the game will determine the likelihood of additional regulation, which will, in turn, determine the extent to which a firm will push against the threat. If a more explicit form of regulation will place a heavy financial burden on the incumbent - that is, a burden in excess of extractable profits - this will provide a strong incentive for it to act competitively to lessen the likelihood of intervention. In this regard Jarden Morgan, when commenting on the likely reaction of Telecom to a threat, stated that:

> The influence of the threat of regulation on Telecom's behaviour will depend on the expected costs that Telecom will bear if it exercises market power. ... The costs that regulation would impose on Telecom must be high enough such that, when multiplied by the probability of suffering the cost, the penalty is equal to the social cost of the violation.[13]

Besides cost, the perceived credibility of additional action will influence the monopolist's behaviour. For example, the monopolist will maximise profit if he/she does not believe the Government will respond. Similarly, if the firm does not know which path it should follow to avoid intervention, the monopolist will show a greater inclination to maximise profit because of uncertainty surrounding the threat. For these reasons Ratner has firm views on the credibility of the Government's threat. He explains:

> The threat of regulation can, I suggest, be compared to having an atom bomb as one's only weapon. As America learned only too well, the threat is not particularly effective to control those who can easily see the reluctance to use it. In New Zealand this is also the case. Everyone knows that the Government is unlikely to use regulation, preferring that both parties sort out their problems through negotiation.[14]

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[12]. Electricity Task Force, supra, note 7, pp 52-53.

[13]. Jarden Morgan, supra, note 6, p 42.

[14]. Ratner, supra, note 2, p 28.

However, in being credible the Government must not intervene too quickly, because the "market styled" negotiating process should have time to develop. For this reason the Government should see how the existing regulatory framework controls the use of market power before imposing explicit rules. Nevertheless, a lack of credibility could have a more serious effect in that it could distort the entry decisions of other firms. Distortion would occur because entrants will not know whether the incumbent will allow them to enter a market, and how the incumbent will treat them should they enter.

Therefore if credibility becomes a problem, the Government should respond by taking pro-active moves to make parties meet its objectives. For example, the Government could review the existing regulatory regime; or establish measures to detect the use of monopoly power. Similarly it could increase the reliance it places on affected parties to voice concern over aggravations; or could issue policy statements, of a greater depth or detail, to increase guidance on the likely response should the dominant party not meet these goals. I will discuss each of these measures in the next two sections. During this discussion I will assume the Government has not allowed lobby group pressures to compromise the goal of efficiency.

4.3 Government Policy Statements

Governments design policy statements to increase credibility and reduce the uncertainty associated with a threat to regulate. They outline, in whatever degree of detail, what the Government expects from industry and may even indicate what will happen should the industry not meet those expectations.[15] In other words, these statements have *`the purpose [of trying to] spell out in more detail under what conditions the Government might consider imposing the detailed regulation of the Commerce Act'*.[16]

The Government should only issue these statements in markets affected by the monopoly because competitive rivalry will force efficiencies in other markets. Therefore the Government could issue statements to limit the monopolist's ability to extract profits in monopoly markets. It could also detail statements in competitive markets to direct the monopolist toward granting

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[15]. Jarden Morgan, supra, note 6, p 41. The authors comment, when talking about the privatisation of Telecom, that *'the behaviour that is unacceptable and might lead to regulation would need to be clearly spelt out by Government to provide maximum clarity to Telecom'*.

[16]. Anderson, supra, note 1.

fair and reasonable access to the monopoly.[17] Stevenson comments on the use of these statements:

> Government policies in industry sectors, particularly where substantial deregulation leaves a vacuum, must be explicitly stated. Policy statements are an important transitional measure especially given the long history of direct regulation and relatively immature competition law framework. Such policy statements assist both the commercial players and the institutions expected to play a part in bringing about the government's aims for effective competition in that sector. These also give notice of the threshold for further government intervention if competition policy measures are insufficiently effective.[18]

When formulating content, the Government could do so based on either general or specific criteria. A specific statement would create greater certainty but could limit the potential for negotiation because parties to an agreement may believe all the substantive issues settled. If so the statement will lack transparency because it will create distortions now due to the Government's inability to fully specify all factors under consideration. The statement could also create future distortions because the factors considered may alter. Jarden Morgan sum this dilemma by stating:

> If a broad specification of the problem reduces the certainty of the scope of the threat of regulation, the deterrent effect will be reduced. ... On the other hand, the adoption of a detailed set of guide-lines rather than a general standard involves costs in detailing the standard initially and in revising the rules as conditions change.[19]

To resolve this problem the Government could write a general statement to maximise the potential for negotiation and heed the objective of deregulation. This statement should provide sufficient incentive for parties to to negotiate their own agreements.[20] This statement would be more credible if the Government threatened to detail a more specific statement should the parties not follow the original statement. However, before moving to a more specific statement, or more explicit forms of regulation, the Government must be patient and let the existing regime develop. This patience, in turn, will allow the Government to review the existing statement's content by referring to what has happened in the past.

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[17]. If coverage extended to markets where dominance was not an issue the use of a statement could bias the operation of a market and in doing so not allow for the realisation of efficiencies.

[18]. Stevenson J., *Competition Policy: Legal Appraisal of Current Situation,* NZIPA Seminar on Competition Policy in New Zealand, 27 February 1992, p 6.

[19]. Jarden Morgan, supra, note 6, p 41.

[20]. Donaldson H., 'Market Dominance - Issues and Options, Comment,' *State Owned Enterprises: Privatisation and Regulation - Issues and Options,* Institute of Policy Studies, Seminar, Session Two, 14 September 1988, Regulation: Policy Issues and Options, p 43. Donaldson comments that *'if SOEs are concerned about the threat of price regulation, that threat becomes a rather vague one if the criteria for imposing price control aren't clear and if the rules for price control, if it is imposed, are also obscure'.*

With these issues in mind, the Government has taken the policy path of less intervention in that they will only provide more detailed direction should the need arise. This stance has the advantage of flexibility for it allows the Government to move toward specific criteria should the need arise, rather than over-specifying the criteria now and having to move back toward a general strategy in the future. For these reasons general statements are consistent with existing regulatory policy in that they are "light-handed" and do not conflict with the policies of a deregulated market.

4.4 Information Disclosure and Monitoring

To limit divergence between the objectives of the principal and agent, the principal should monitor the actions of the agent to ensure compliance. Policy statements will not do this; however, they will establish criteria by which other parties could assess the incumbent's actions and report to the Government. This type of reporting will create a problem in that the objectives of these groups will colour the content of their representations. Therefore the Government should consider a different monitoring regime.

Such an approach could require a firm to disclose information concerning its activity. Disclosure makes a threat more credible because if the disclosed information is relevant, the government can detect the use of monopoly power by comparing that information with that of similar industries in other countries; the best practices of other industries; or a weighted average of performance in other industries. Of course comparison will only provide a guideline for different environments and circumstance will limit their usefulness.[21]

Besides detection,[22] the disclosures provide market participants with information they would otherwise have had in a competitive market. The Ministry of Commerce explains:

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[21]. See Veljanovski C. ed., 'Privatisation: Monopoly Money or Competition,' in *Privatisation & Competition: A Market Prospectus,* Institute of Economic Affairs, London, 1989, p 50. Comparisons performance refers to the concept of Yardstick Competition. Veljanovski suggests the value of this concept has been overstated because of a lack of similarity between industries and countries. For an application see Hillman J.J., 'Oil Pipeline Rates: A Case for Yardstick Regulation,' in Crew M.A. ed., *Competition and the Regulation of Utilities,* Kluwer Academic Publishers, Boston, 1991, pp 71-96. Hillman bases his yardstick on competitive market prices then relates these prices to pipeline rates.

[22]. Cabinet Committee Paper, *Telecom: Disclosure of Information About the Quality of the Domestic Telephone Service,* Wellington, 8 May 1990. Submission from the Office of the Minister of Consumer Affairs, p 1. Also see Durbin S., 'Implementation of Reforms in the Electricity Industry,' *Cabinet Committee Paper,* 3 November 1989, para 4. He discusses, with reference to the Electricity Task Force Report, the greater use of information disclosure as a monitoring device.

> Competitive markets generate information which enables the public to choose suppliers; commercial firms to monitor the behaviour of competitors; and potential new entrants to assess market prospects. In markets where competition is limited or even absent, there are fewer checks on the conduct of the dominant firm, and customers, competitors, and potential new entrants have insufficient planning information. Information disclosure requirements can correct this deficiency, and consequently form an important part of the Government's competition policy.[23]

When setting disclosures the Government, to maximise the use of the competitive market, should - as it should when issuing threats and policy statements - only consider disclosures in markets affected by dominance. For this reason the Government should not require disclosure in markets not affected by the monopoly because this would place the incumbent at a competitive disadvantage when related to its rivals. Therefore the monopolist should only disclose information concerning monopoly and related markets. However, by disclosing this information the Government should consider other disclosures to augment this regime because the initial control could create an incentive for evasion.[24] In this regard the Ministry of Commerce suggested:

> To enhance the effective operation of Section 36, information disclosure requirements would be useful. ... In general the information required from owners of essential facilities is likely to include: financial statements; pricing of access; disclosure of current terms and conditions for access; and disclosure of any planned changes to the terms and conditions or to the technical specification of the network where such changes would force changes on a competitor.[25]

While the areas of coverage will be important, the effectiveness of the measure will depend on the accuracy of the measure; the ability to measure all variables associated with dominance, and the extent to which the measure follows technology changes.[26] The extent interest groups have forced the Government to tilt disclosures toward its own interests will also limit effectiveness.

If the Government has decided to use disclosures, it should then determine if net benefits will result from the disclosure. In this regard excessive cost will make the requirements less transparent; however, the Government should weigh that cost against the benefits of provision.

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[23]. Ministry of Commerce, *The Telecommunications (Disclosure) Regulations 1990,* Telecommunications Information Leaflet No 4, Wellington, 25 September 1990, p 1.

[24]. Cabinet Committee Paper, supra, note 22, submission from the Ministry of Commerce, p 2. The Ministry makes reference to quality of service disclosures having to be used to augment price control requirements otherwise the quality of service may diminish. Also see Thies C.F., and Manger P.R., 'Price Controls With Competition in Quality,' *The Northeast Journal of Business & Economics,* Vol 14, No 2, Spring/Summer, 1988. The authors discuss the quality trade-off that occurs with the imposition of price control. Also Martin C., *Aspects of the Regulation of Natural Monopolies,* Treasury Working Paper, 1992, p 19.

[25]. Ministry of Commerce, *Guarantee of Access to Essential Facilities,* Discussion Paper, Wellington, 1989, p 22.

[26]. Martin, supra, note 24, p 19.

In making this assessment one must remember that management will almost certainly receive such information already, so the requirement will minimise regulatory cost and maximise benefit. Then once the decision has been made to proceed, the Government should consider the best method of implementing these measures. It could rely on the threat of additional regulation if the firm does not conform to the requirements, or instead it could impose specific regulation to ensure disclosure.

The next two sections will consider the options for implementing these measures, or for that matter any other regulatory threat. I will do this by first discussing self-regulation, followed by explicit forms of regulation.

4.5 Self-Regulation

An industry or firm has one of two options when responding to a threat. One would be to defy the wishes of the Government, either in whole or in part, and so face the threat of "heavy-handed" regulation. Alternatively it could accommodate the wishes of the Government by following its recommendations. If it took the second option the firm would, in effect, regulate itself in that the Government would not need to impose explicit regulation to achieve its policy objectives. John Chetwin summed up the role of self-regulation by commenting:

> Directors of SOEs may also voluntarily adopt business practices which permit competitors to operate and which limit the exercise of their company's dominant market position. ... The objective of self-regulation is to avoid more severe or onerous forms of formal regulation.[27]

Self-regulation will occur when a firm finds it less expensive to conform to a threat rather than disregard it. Therefore to assess the effectiveness of the threat the Government should weigh the burden that additional regulation places on a firm against the monopoly profit a firm can earn by disregarding it. If profits exceed the cost of regulation then a firm will disregard the threat; however, this stance will reverse if costs equal or exceed profits. These measures will change over time if the intent of the Government alters or if the monopolist's power changes. For this reason the Government should re-assess the credibility of its threat, or perhaps consider imposing "heavy-handed" regulation.

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[27]. Chetwin J., 'Market Dominance - Issues and Options, Comment,' *State Owned Enterprises: Privatisation and Regulation - Issues and Options*, Institute of Policy Studies, Seminar, Session Two, 14 September 1988, Regulation: Policy Issues and Options, p 34.

4.6 Explicit Regulation

If a dominant firm does not follow its wishes, the Government should consider using explicit regulation to force compliance, because such regulation will provide greater certainty than a threat. However, before intervening the Government should assure itself that the dominant firm has consistently used its position to the disadvantage of others; and that the "anti-competitive" acts would not have occurred in a normal competitive environment.

Therefore the Government should first have the patience to see whether the existing regulatory framework will effectively promote competition in the medium term, rather than jumping in now to solve "momentary aberrations". Even if the aberrations are not momentary, the Government should not consider explicit regulation if the aberrations cause minimal damage or the costs of correcting them are too great.

If there is a need for additional regulation, the Government must consider the best way of implementing this measure. Essentially, two options exist. First, where consistencies or likely consistencies exist between various industry inefficiencies, the Government could generalise the regulatory solution (for example, antitrust law). This approach will minimise the need for industry specific regulation and so be more consistent with the policy of deregulation. It may even retain "light-handed" regulatory characteristics in that the Government or other party will only use its provisions should an organisation stray from desired conduct. Generalised regulation may have advantages over a threat because it will provide greater certainty to industry, which will lessen the monitoring costs of third parties. Such legislation will also mean similar requirements face all industries, which will help promote policy consistency.[28]

While having advantages, generalised law will not always be applicable because it cannot cover every situation facing every firm. Similarly, there will be difficulty tailoring generalised laws toward the similtaneous promotion of multiple objectives.[29] Therefore the Government should consider industry specific regulation. Hunter Donaldson explains:

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[28]. The Commerce Act represents a generalised form of regulation. It contains law-based provisions that concern the use of a dominant position and enables price controls to be implemented should they be needed. With overseas privatisation this approach has not been followed to the same extent. The British have relied to a large extent on industry specific regulation, while the Australians, although having similar competition laws to our own, have relied on industry specific forms of regulation.

[29]. See Holmes J., 'The Telecommunications Act 1991 and its Meaning for Consumers and Competition,' in Corones S.G. ed., *Competition Policy in Telecommunications and Aviation*, The Federation Press, Sydney, 1992, pp 217-232, at 226. The author comments on the industry specific nature of telecommunications law in Australia. *'Why, then, is the*

> ... if the concern is that a general competition law with general propositions about abusive market dominance or preventing mergers on the basis of creating market dominance will not work for a particular sector, you are probably driven back to more sector-specific regulation.[30]

The Government could create such regulation by passing industry specific legislation or by the Government retaining ownership rights to allow it to place requirements in the organisation's articles of association.[31]

Irrespective of the general or specific nature of the regulatory approach the Government will need a mechanism to administer the control. In this area two options exist. First, the Government could rely on private parties taking action when they believe the dominant party's conduct has breached those laws. This approach will produce regulatory efficiencies because by placing the cost of action on the aggrieved party, they will only seek damages when the action of the dominant party warrants intervention. Obviously not all parties can afford the expense of action, so the Government should consider appointing an administrator to ensure the regulations are upheld. There will be a greater need for administration when using, or moving to, industry specific regulation. In this regard the Government should consider using an industry specific regulator, because to control behaviour and perform the tasks required, it will require more detailed knowledge than that required with general law.

The task content will determine whether the administrators are regulators or enforcers. Enforcers are more likely with general legislation because they will only take action when an organisation's conduct breaches regulatory guidelines. Regulators, on the other hand, are more likely to result in an industry specific regulatory setting because they will often have significant influence over the day to day operations of an entity. Feil clarified the distinction between the two when he said:

> A regulator has a far more direct control over the subjects it regulates. Generally regulators are empowered to order a subject to do particular things. For example, to sell at particular prices, or to operate within certain profit constraints. Alternatively, some regulators are empowered to control the relationships between competitors and to mediate or arbitrate when conflicts arise. A regulator seeks to

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telecommunications industry so different from other industries, that it requires special legislation and a special regulatory agency to regulate and promote competition? ... The range of national and social goals for telecommunications is such that direct Government specification and balancing is needed, and these matters are inappropriate for general competition law, or for administration by generalist agencies'.

30. Donaldson, supra, note 20, p 43.

31. Both options have been used by the New Zealand Government. The sale of Telecom saw pricing obligations placed in the articles of association, while during the sale process the Government passed legislation to give it an ability to ask Telecom for disclosures above and beyond the requirements of the Company's Act.

> substitute for the operation of the market. In contrast, as an enforcer, the Commission cannot (except in very limited situations) direct a company to do any specific thing.[32]

Regulators have the advantage of being able to promote competition more actively because they can mediate between parties to provide rapid solutions in areas of contention. The efficiencies of these solutions will, however, depend on the objectives of the regulator, because if he/she must consider a number of objectives, any decision may seem, or even be, inequitable to both or either parties. Gist commented on this potential when discussing the objectives of OFTEL, the regulator of British Telecom. He said:

> ... although the list of explicit secondary objectives had been added, including the duties to promote consumers' interests and to maintain and promote effective competition, potential inconsistencies between these are immediately apparent. For example, the simultaneous promotion of these competition objectives, together with promotion of the interests of producers ... could be expected to be difficult.[33]

Such conflicts could, in turn, lead to decisions that promote inefficient investment and could have the potential to cause arguments between parties concerning settlement terms. This potential will limit the effectiveness of the regulator's function.

The effectiveness of a regulator will also depend on the level of information available to perform the tasks required. The regulator will find it difficult to gather information in industries characterised by rapidly changing technology. Therefore to control the industry the regulator may have to increase the level of regulation. Expansion may also occur if the existing provisions are ineffective when controlling dominance. The Ministry of Commerce recognised these limitations when it commented:

> There are, however, a number of draw-backs associated with industry specific regulation, and setting up regulatory authorities to make and police it. These include, for example: the difficulty of formulating and policing workable and effective regulations in a rapidly changing and complex environment; the costs of administration and compliance for all parties; the tendency of regulators to proliferate as more and more detailed rules are required to plug loopholes and compensate for undesirable and/or unforeseen consequences. This in turn means that regulatory bodies tend to expand as the rules become more detailed and comprehensive, and to get involved in the affairs of competing parties in ever greater detail; the tendency for detailed rules to favour new entrants which carries the risk of over-stimulating investment by new entrants, resulting in uneconomic and inefficient duplication of facilities.[34]

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[32]. Feil J., *Competition Law and Policy: The Enforcement Role,* NZIPA Seminar on Competition Policy in New Zealand, 27 February 1992, p 20.

[33]. Gist P., *The Role of Oftel,* London Business School, May 1988, p 25.

[34]. Ministry of Commerce, supra, note 25, pp 6-7. Also see Belgrave J., *Who Should Hold the Regulatory Reins?* Secretary of Commerce, p 12. The author concurs with the conclusions of the Ministry when he comments that *'some commentators advocate an industry specific regulatory authority. This proposal imposes a cost to Government of setting up and*

For these reasons the Government preferred the more general approach of the Commerce Act to more specific forms of regulation because it shifted the responsibility for settlement back onto the parties. A general approach will have the advantage of reducing the direct costs of regulation both to the Government and to the negotiating parties because they will have an incentive to minimise the cost of this process. While the preservation or enhancement of monopoly power may create an incentive for the incumbent to delay proceedings, the entrant can expedite proceedings by using the courts or by voicing his/her concerns to Government.

4.7 Conclusion

Instead of directly regulating the operations of its privatised natural monopolies, the New Zealand Government has relied on those industries to regulate themselves, based on the threat of additional action should reliance prove wanting. This stance has the advantage of removing the direct costs of regulation, while giving the firm greater flexibility to respond to changing market conditions.

The extent to which a firm conforms to the threat will depend on a number of factors. If the firm believes that costs of heavy-handed regulation are less than the monopoly profits it could extract, an incentive will exist for the firm to monopolise price. If the firm does not find the threat credible, or is not certain what will happen should it disregard the threat, it will have less incentive to conform.

Therefore the success of the threat will depend on its credibility; certainty; and whether the costs of additional regulation exceed the costs of the lighter-handed approach when compared to the profits obtainable from captive markets. However, merely relying on a threat will not ensure that a firm achieves efficiencies, because politicians are influenced by the desire to retain power. Therefore any threat could depart from the over-riding goal of efficiency - a move that would lose the transparency of that threat because some groups will benefit at the expense of others.

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maintaining such a body. There are also the costs to industry of conforming to those regulations; and there is also the possibility of this regulatory authority becoming caught by regulatory creep, and slowly covering the industry with regulation'.

Chapter Five
Antitrust Law

5.1 Introduction

Deregulation of the New Zealand economy has enabled firms with market power to use that power anti-competitively. Antitrust law has been used as an instrument to limit this potential because of the greater certainty such laws provide over a threat to regulate. As well as greater certainty, such laws retain the characteristics of "light-handed" regulation, because the onus is still placed on a dominant party to act competitively. In other words, such law maximises economic efficiency by making maximum use of the competitive process.

In this chapter I will discuss the government's rationale for selecting antitrust law to regulate natural monopolies. Then I will examine the general provisions of the Commerce Act, which will lead to a more specific discussion looking at the sections relating to market dominance and collusive agreements. This overview will allow me to determine how the Act could apply to, and determine any problems in applying it to, natural monopolies.

5.2 Antitrust Law

With economic liberalisation the Government was clearly concerned that the use of market dominance could mitigate the goal of liberalisation (ie. the efficient allocation of resources). While a threat could have limited this potential, the then Minister of Trade and Industry, the Hon David Caygill (MP), indicated that the proposed law would make this goal more certain. He explains:

> The Bill must be viewed against the background of the fundamental change that is occurring in the New Zealand economy. The Bill ... will **ensure** that the conditions for workable ... competition exist and that the benefits of increased economic efficiency ... are enjoyed by [everyone].[1]

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[1]. The Hon David Caygill (MP), *New Zealand Parliamentary Debates,* 11 June 1985, p 4681.

While the Act applied to the economy generally, a new need emerged with the commercialisation and privatisation of state-owned natural monopolies. Traditionally, their power was controlled by the Government but by divorcing their operation from political scrutiny they could now, amongst other things, increase price in monopoly markets and/or destroy or prevent competition in markets that relied on access to monopoly facilities.

To allay this fear and provide the maximum incentive for efficiency, the Government had to promote competition, not so much in the monopoly market, but in those markets where foreclosure by a vertically integrated monopolist could prevent entry. To this end the Ministry of Commerce suggested three possibilities. First, it suggested the use of current antitrust law (with or without modification); secondly it proposed amending this law with a specific access provision; and finally it suggested using industry-specific regulation to provide access.

In determining which of the three to adopt, the Ministry studied overseas approaches.[2] This led the Ministry to reject industry specific law for many reasons. First, it felt it would be difficult to formulate in a rapidly changing and complex environment and costly for all parties concerned. Secondly, the Ministry was concerned that regulation created a tendency for more regulation and finally, that industry specific laws created an incentive for new entrants to invest "inefficiently".[3] Instead, antitrust law was selected to govern essential facility access because its "light-handed" properties provided an incentive for a dominant firm to act competitively. Breyer explains the place of antitrust law alongside more explicit forms of regulation:

> ... antitrust is not another form of regulation. Antitrust is an alternative to regulation and, where feasible, a better alternative. To be more specific, the classicist first looks to the marketplace to protect the consumer; he relies upon the antitrust laws to sustain market competition. He turns to regulation only where free markets policed by antitrust laws cannot cure.[4]

Antitrust will most likely prompt efficient intervention because with the costs falling on the parties to an action, they will only take action if they were likely to receive net benefits. However, in selecting antitrust, the Ministry - in a manner consistent with Breyer - reserved the right to intervene should the Act's application prove ineffective. The Ministry explains:

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2. Ministry of Commerce, *Guarantee of Access to Essential Facilities,* A Discussion Paper, Competition Policy and Business Law Division, December 1989, pp 6-7. The Ministry concluded that the approach of the United States (US), United Kingdom and Australian Governments was to a large extent "industry specific", although the US used antitrust law to augment industry laws.

3. Ibid, p 6. Rejection was probably reinforced by past regulatory experience, especially with natural gas. Current Government policy was also against specific regulation.

4. Breyer S.G., 'Antitrust, Deregulation, and the Newly Liberated Marketplace,' *California Law Review,* vol 75, 1987, pp 1005-47, at 1007. Also see Pengilley W., 'Restrictive Trade Practices: Competition Unleashed?' *The New Zealand Law Journal,* March 1988, pp 86-90.

> In its decisions to date the Government has decided to rely on the Commerce Act 1986 as the basis for guaranteeing access to essential facilities. However it has noted that some enhancements to the Act may be necessary to increase its effectiveness in dealing with essential facilities problems.[5]

This concern stemmed from a number of areas. First, that facility owners had information above and beyond that obtainable by those requiring access, which could lead to the information being used for anti-competitive means. Secondly, there was a fear that an incumbent would delay negotiations and use litigation to stall entry.[6] Thirdly, many believed that uncertainties associated with the courts interpretation of antitrust law may limit investment by competitors in related markets. Finally, there was a possibility that a natural monopolist could avoid the Act's application by allowing capacity to fall to a level that did not allow the incumbent to grant access because they did not have available capacity.[7]

The Ministry sought to resolve these problems by requiring the monopolist to disclose information. They even considered the possibility of designating certain facilities as "essential".[8] These moves had the objective of reducing the asymmetry between parties; speeding the process of negotiation; and reducing the need for court based solutions. However, they were opposed by Treasury, which reasoned:

> ... that no need has been demonstrated for including the proposed essential facilities provisions in the Commerce Act; [therefore] no change to section 36 of the Commerce Act is required at this stage and that it be relied upon as the basis for guaranteeing access to essential facilities in appropriate circumstances.[9]

For this reason the Government took a "wait and see" approach by relying on the Commerce Act, which it would only supplement if it proved ineffective. This stance was consistent with the objective of deregulation in that the Government would only consider industry specific regulation if the "antitrust" general measures did not work.[10] With these justifications in mind, I will briefly summarise the Act, then discuss its two main substantive provisions dealing with anti-competitive behaviour.

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5. Ministry of Commerce, supra, note 2.

6. See Stevenson J., *Competition Policy: Legal Appraisal of Current Situation,* NZIPA Seminar on Competition Policy in New Zealand, 27 February 1992, p 5. The author discusses the current legal and institutional regulatory framework in New Zealand. He makes suggestions on how the Government could speed the court system to minimise delay.

7. Ministry of Commerce, supra, note 2, pp 19-21, for a more detailed discussion.

8. Ibid, pp 22-26, for greater detail.

9. See The Treasury, *Commerce Act Review: Section 36 and Essential Facilities,* Treasury Report, 17 July 1989.

10. Ministry of Commerce, supra, note 2, p 6. The report states that *'While the Government's preference is to use general competition law, it has stated that the case for industry specific regulation will be re-examined if general competition law is not effective. There is thus an important threat of industry specific regulation'.*

5.3 The Commerce Act

The Commerce Act forms the basis of antitrust law in New Zealand. It has a statutory base similar to that of the Australian Trade Practices Act of 1974, which codified many antitrust developments originating from the American Sherman, Clayton and Federal Trade Commission Acts.[11] The Commerce Act has the objective of promoting *`competition in markets within New Zealand'*.[12] The Court of Appeal decided, in *True Tone v Festival Records,* that this objective rested *`on the premise that society's resources are best allocated in a competitive market where rivalry between firms ensures maximum efficiency in the use of resources'*.[13]

In its promotion of competition the Act takes a dynamic approach in that it uses workable or effective competition as its standard. Heydon comments that:

> Workable competition means a market framework in which the pressures of other participants (or the existence of potential new entrants) is sufficient to ensure that each participant is constrained to act efficiently and in its planning to take account of those other participants or likely entrants as unknown quantities.[14]

He goes further to comment on the potential for inefficiency when these constraints do not exist. In such cases, he concludes, antitrust law should create:

> ... an opportunity for each participant or new entrant to achieve an equal footing with the efficient participants [emphasis added] in the market by having equivalent access to the means of entry, sources of supply, outlets for product, information, expertise and finance. This is not to say that particular instances of the items on the list must be available to all. That would be impossible.[15]

To ensure this the Act has a number of substantive provisions to promote these opportunities. Part two deals with restrictive trade practices, which range from collusive agreements to the use of a dominant position; part three with business acquisitions that result in or strengthen a dominant position; and part four which allows the Government to implement price control should a dominant firm exploit consumers or competitors.

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11. The Australasian statutes prohibit similar activity to the American statutes but are more explicit than the American laws. In other words, the Australasian legislators have enacted provisions based on American statute and case law.

12. The Crown, *The Commerce Act 1986,* Long Title.

13. *Tru Tone Ltd & Others v Festival Records Retail Marketing Ltd,* (1988) 2 NZBLC 103,286 at p 103,291.

14. Heydon J.D., *Trade Practices Law,* second edition, 1989, p 1548.

15. Ibid.

Besides substantive provisions, the Act has several other sections that augment the above. Part five allows for the authorisation of some restrictive trade practices and business acquisitions if public benefit outweighs the anticompetitive detriment, or for the clearance of business acquisitions if acquisition will not effect dominance. Part six concerns enforcement, remedies and appeals under the Act, while part seven contains miscellaneous provisions concerning the ability to obtain information and to give evidence.

The Act establishes the Commerce Commission and gives it power to promote competition by providing it with enforcement, investigative and decision making roles. To fulfil its function the Commission can obtain any information it considers necessary or desirable; a right that it can enforce with penalties. Besides the Commission, the courts have a very important enforcement role, with the High Court being able to hear suits from private parties or the Commission in areas covering restrictive trade practices and business acquisitions. Sections 77 and 78 allow High Court judges, under certain circumstances, to sit with lay members who bring economic and commercial knowledge to the decision-making. The High Court also hears appeals from Commission decisions and can itself be subject to appeal in higher courts.[16]

5.4 Section 36: Market Dominance

Section 36 prohibits any action that restricts, prevents, or eliminates competitors from any market. Acts with this purpose could include predatory pricing; non-price predation; price discrimination; or a refusal to deal. The section reads:

> **Section 36 Use of Dominant Position in a Market**
>
> **36(1) [Prohibited Purposes]** No person who has a dominant position in a market shall use that position for the purpose of-
>
> (a) Restricting the entry of any person into that or any other market; or
>
> (b) Preventing or deterring any person from engaging in competitive conduct in that or in any other market; or
>
> (c) Eliminating any person from that or any other market.

Read literally one could be mistaken for believing the section was to protect competitors rather than promote competition; however, the latter has been the interpretation adopted by the courts for they have read it in conjunction with the Act's long title. The High Court, in *Union Shipping v Port Nelson,* explains:

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16. For further discussion see Hampton L.F., 'Aspects of the Commerce Act 1986,' in Farrar J.H., and Borrowdale R., eds., *Butterworths Commercial Law in New Zealand,* second edition, Butterworths, Wellington, 1992, pp 639-643.

> Such provisions are directed at protection of the concept of competition as such. They are not directed at the protection of individual competitors, except in so far as the latter may promote the former.[17]

Given the section promotes competition (specifically "workable competition"), it should do so when the market "fails" to provide this outcome. The court has determined when this has occurred based on the section's wording. I will now discuss how the courts have construed the section.[18]

Market

To assess the level of dominance one must define the relevant product market. To facilitate this process the Act provides some guidance:

> 3(1A) The term "market" is a reference to a market in New Zealand for goods or services as well as other goods or services that, as a matter of fact and commercial common sense, are substitutable for them.

The courts have interpreted this section to mean they must first identify geographic and product markets. The Australian Trade Practices Tribunal, in *Re Tooheys*, explains:

> The market should comprehend the maximum range of business activities and the widest geographic area within which, if given a sufficient economic incentive, buyers can switch to a substantial extent from one source of supply to another and sellers can switch to a substantial extent from one production plan to another.[19]

When defining market, the courts should also consider the extent to which the selling function (eg. wholesaling or retailing) affects the definition; how long it takes for product substitution to occur; and the incentives required for that substitution to occur.[20]

Dominant Position

Once the market has been defined the court can assess dominance. Dominance represents the threshold test of this section. If a party does not have dominance it cannot be liable. If

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17. *Union Shipping New Zealand Ltd v Port Nelson Ltd,* (1990) 2 NZLR 662, p 700; 3 NZBLC. Also see *Queensland Wire Industries Pty Ltd v The Broken Hill Proprietary Company Ltd,* (1989) ATPR 40-925.

18. For an overview of these issues see Hampton L., 'Section 36(1) of the Commerce Act 1986: An Analysis of its Constituent Elements,' in Ahdar R. ed., *Competition Law and Policy in New Zealand,* The Law Book Company Limited, Sydney, 1991, pp 179-216.

19. *Re Tooheys Ltd,* (1979) ATPR, 40-013, at 18,196. When assessing substitutability the Australian Trade Practices Tribunal, in *Queensland Co-operative Milling Association (QCMA),* (1976) 1 TPC 109, at 17,247, stated: *'[i]t is the possibilities of such substitution which set the limits upon a firm's ability "to give less and charge more". Accordingly, in determining the outer boundaries of the market we ask a quite simple but fundamental question: If the firm were to "give less and charge more" would there be ... much of a reaction?'*

20. See Brunt M., '"Market Definition" Issues in Australian and New Zealand Trade Practices Litigation,' in Ahdar R., *Competition Law and Policy,* The Law Book Company Ltd, Sydney, 1991, p 130.

dominance exists liability could occur, but it will not necessarily result because of it. The Trade Practices Tribunal in *QCMA* determined that market power allows a party to give less and charge more.[21] Although the Tribunal made this statement in the context of the then Australian merger test (substantially lessening competition) it also has relevance in the context of dominance.[22] The Act defines dominance as follows:

> **3(8) [Dominant Position]** A dominant position in a market is one in which a person ... is in a position to exercise a dominant influence over the production, acquisition, supply, or price of goods or services in that market and for the purposes of determining whether a person is in a position to exercise a dominant influence ... regard shall be had to -
>
> (a) The share of the market, the technical knowledge, thee access to materials or capital of that person ... :
>
> (b) The extent to which that person is constrained by the conduct of competitors or potential competitors in the market:
>
> (c) The extent to which that person is constrained by the conduct of suppliers or acquires of goods or services in that market.

When determining the existence of dominance, the courts have considered elements of market structure as well as behvaioural characteristics. Market structure consideration has centred on the number and size distribution of independent sellers; the height of entry barriers; the degree of extreme product differentiation; the extent of vertical integration; and the nature of arrangements between firms that restrict their ability to function independently.[23] Northrop J, in *TPC v Ansett,* discussed the relevance of behavioural characteristics and how they could aid structural analysis. He believed the extent to which a firm was inhibited in its pricing decisions by rivals was as important as structural issues.[24] Besides dominance at a point in time, the courts have also been prepared to conceed that transitionary dominance may not meet the dominance test.[25]

When assessing these factors, a recent New Zealand Court of Appeal judgment emphasised that dominance established a higher threshold than a high degree of market power. Richardson J, in *Telecom v Commerce Commission,* explains:

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21. QCMA, (1976) 1 TPC 109.

22. See *Union Shipping* (1990) 3 NZBLC 101,618, at 101,643. The members of the Court equate market power with dominance. Also *Lion Corporation Limited v Commerce Commission,* (1982) 2 NZLR 682, at 688. Davison CJ refers to the meaning that the Commerce Commission gave a dominant position: *'Dominance is a measure of market power. Being in a "dominant position" is interpreted by the Commission, in essence, as having sufficient market power (economic strength) to enable the dominant party to behave to an appreciable extent in a discretionary manner without suffering detrimental effects in the relevant market(s)'.*

23. Refer to *Trade Practices Commission v Ansett Transport Industries (Operations) Pty Ltd,* (1978) ATPR 40-071 and *QCMA.*

24. Ibid, *TPC v Ansett,* (1978) ATPR 40-071.

25. *Telecom Corporation of NZ Ltd v Commerce Commission & Ors,* (1991) 3 NZBLC 102,340, at 102,375-102,377. The Court of Appeal reaffirms the time dimension on appeal, 4 NZBLC 102,724, see Richardson J at 102, 736.

> ... s 3(8) requires that the influence which the person concerned is in a position to exercise is so high or great or large as to be characterised as "a dominant influence". In this regard it is not helpful to rely on dicta in Australian cases concerned with different statutory language such as "substantially lessening competiton" (*Re QCMA (1976) 8 ALR 481),* and "a substantial degree of power in a market" *(Queensland Wire Industries (1989) 167 CLR 177).* Given this concern that on the face of the judgments both the Commission and the High Court set too low a threshold in determining that dominance existed.[26]

This reasoning led the Court to unanimously agree that courts should not construe dominance on technical grounds. Instead, it should give "dominance" its ordinary meaning.[27] The attention subsequent courts give this dicta will determine its place in case law. This interpretation, however, seems problematic because it does not equate dominance with a high degree of market power - the standard favoured by the Full Federal Court of Australia in *Arnotts.*[28]

Use

Even if dominance exists, liability will only result if it has been used for a prescribed purpose. The courts have construed "use" and "take advantage of" neutrally. Following that interpretation the courts have sought to establish a causal link between dominance and purpose.[29] The High Court in *Union Shipping* clarifies the reasoning behind this issue:

> If a person simply acts in a normal competitive fashion, as he would whether dominant or not, that person hardly can be said to be 'using dominance'. ... Ultimately [determining] this is a question of fact.[30]

The High Court of Australia's decision, in *Queensland Wire,* provides more meaning. The various judgments explain that a competitive market standard should be the test for determining whether there has been a taking advantage of market power:

> In effectively refusing to supply Y-bar to the appellant, BHP is taking advantage [use in the New Zealand statute] of its substantial market power. It is only by virtue of its control of the market and the absence of other suppliers that BHP can afford, in a commercial sense, to withhold Y-bar from the appellant. If BHP lacks that market power - in other words, if it were operating in a competitive market - it is highly unlikely that it would stand by, without any effort to compete, and allow the appellant to secure its supply of Y-bar from a competitor.[31]

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26. *Telecom Corporation of New Zealand v The Commerce Commission & Ors,* (1992) 4 NZBLC 102,724, judgment of Richardson J, at 102,735-102,736.

27. Ibid, at 102,735. See Richardson J at 102,735; he comments: *'Clearly the dominance test sets a rigourous threshold. It is not sufficient that the influence be advantageous or powerful. It must be dominant. The word comes from the Latin* dominus *meaning master. Only one person can be dominant in a particular aspect of a market at any one time. Not surprisingly standard dictionaries give meanings such as "ruling", "governing", "commanding", "reigning", "ascendant", "prevailing" and "paramount"'.* For similar judgments see McKay J at 102,741 and Casey J at 102,740.

28. *Arnotts Limited v Trade Practices Commission,* (1990) ATPR 41-061.

29. *Queensland Wire* (1989) ATPR 40-925.

30. *Union Shipping* (1990) 2 NZLR 662, at 706.

31. *Queensland Wire* (1989) ATPR 40-925, at 50,011. Also see Pengilley W., 'Queensland Wire and Its Progeny Decisions: How Competent are the Courts to Determine supply Prices and Trading Conditions?,' *Western Australian Law Review,* vol

Finally, the Court of Appeal in *Geotherm Energy* confirmed that there must be a causal link between dominance and purpose. In other words, dominance must have been "used" for a proscribed purpose. Gault J explains:

> It is apparent that the section is contravened only when a person in a dominant position in a market uses that position for one or more of the purposes set out. It is not breached merely because a person in the dominant position competes. Such competition is the very matter the Act is intended to enhance. The conduct prohibited by the section is the use of the dominant market position for the proscribed purposes. There will be circumstances in which the use of the market position and the purpose are not easily separated but the two requirements must be kept in mind.[32]

Purpose

Even if an act was anti-competitive, liability will only result if dominance has been used *'for the purpose of achieving one or more of the results listed in s36(1)(a)-(c)'*.[33] In this regard it will not be sufficient for the plaintiff to show that the actor had an anti-competitive intention; for liability he/she must have purposely pursued the anti-competitive outcome.[34] In other words, the dominant party must have engaged in predatory conduct with the objective of affecting a competitor.

However, the courts have found it difficult to find direct evidence concerning purpose so have often inferred purpose based on a totality of the circumstances. The act provides guidance as far as mixed purposes are concerned:

> **2(5)** For the purposes of this Act-
>
> (b) A person shall be deemed to have engaged, or to engage, in conduct for a particular purpose or a particular reason if- ...
>
> (i) That person engaged or engages in that conduct for the purpose or reason or for purposes or reasons that included that purpose or reason; and
> (ii) That purpose or reason was or is a substantial purpose or reason.

The requisite purpose must be one or more of the prescribed purposes [para (1)(a)-(c)]. Overlap exists between the prescribed purposes because while part (a) (restricting entry) and part (c) (eliminating a competitor) are independent, part (b) (preventing or deterring

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21, 1991, pp 225-257, at 231. Pengilley is critical of this interpretation of use. He comments: *'One can paraphrase the Court's decision by saying that a strong entity must supply its downstream competitors. Surely it is just as important to competition law that individual choice be permitted as to whom not to supply as it is in the case of decisions as to whom to supply'.*

32. *Electricity Corporation Limited v Geotherm Energy Limited,* CA No 169/91; Judgment of Gault J, at 9. For full discussion of "use" see Hampton, supra, note 16, p 754-55.

33. Hampton, supra, note 16, p 756.

34. *Union Shipping* (1990) 2 NZLR 662; 3 NZBLC 101,618. The Court comments that *'intention to do an act, which it is known will have an anti-competitive consequence, in itself is not enough. "Purpose" implies object or aim'.*

competitive conduct) covers both of these plus other situations. Besides overlap, the wording of these sub-sections provides additional guidance to the application of the section. Clearly the reference to "any person" accepts the notion that *`much exclusionary conduct ... is directed at the general threat of future competition'* and not so much at individual parties. Similarly, the reference to "that or any other market" recognises *`that the exercise of market power need not ... take place in the market in which the respondent enjoys a dominant position'*.[35]

5.5 Section 27: Collusive Agreements

While section 36 is directed at unilateral action, section 27 prohibits collective action that had the purpose or effect, or likely effect, of substantially lessening competition in a market (for example these could include price fixing agreements,[36] tying agreements, or exclusive dealing agreements). The section reads:

> **Section 27 Contracts, Arrangements, or Understandings Substantially Lessening Competition Prohibited**
>
> **27(1) [Entering into prohibited]** No person shall enter into a contract or arrangement, or arrive at an understanding, containing a provision that has the purpose, or has or is likely to have the effect, of substantially lessening competition in a market.
>
> **27(2) [Giving effect to prohibited]** No person shall give effect to a provision or a contract, arrangement, or understanding that has the purpose, or has or is likely to have the effect, of substantially lessening competition in a market.
>
> **27(3) [Existing contracts]** Subsection (2) of this section applies in respect of a contract or arrangement entered into, or an understanding arrived at, whether before or after the commencement of this Act.
>
> **27(4) [Unenforceable]** No provision of a contract, whether made before or after the commencement of this Act, that has the purpose, or has or is likely to have the effect, of substantially lessening competition in a market is enforceable.

Section 27 is broad enough to catch all horizontal or vertical concerted conduct. I will discuss the interpretation the courts have given the section below.[37]

Contract, Arrangement, or Understanding

To be liable under section 27 there must be a contract, arrangement or understanding between two parties. "Contract" has a broad statutory meaning because section 2(6) includes any lease or licence over land or buildings. Therefore, a contract will probably include:

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35. Hampton, supra, note 16, p 759.

36. While section 27 could prohibit price fixing agreements, section 30 of the Commerce Act renders price fixing agreements illegal per se.

37. Hampton, supra, note 16, pp 673-689, for further discussion.

> ... any contract, whether express or implied, formal or informal, which is enforceable (or would be enforceable apart from the Commerce Act provision) by legal proceedings and also probably encompasses those contracts which, though still on foot, are rendered unenforceable or voidable because of some imperfection or vitiating factor.[38]

The courts have found it more difficult to determine when an "arrangement" or "understanding" exists.[39] Nevertheless, the courts have established some guiding principles. Smithers J, when discussing an "understanding", explains:

> ... an understanding must involve the meeting of two or more minds. Where the minds of the parties are at one that a proposed transaction between them proceeds on the basis of the maintenance of a particular state of affairs or the adoption of a particular course of conduct, it would seem that there would be an understanding within the meaning of the Act.[40]

A similar interpretation has been given to an "arrangement",[41] but the Australian courts have recognised that this definition may not be as broad as that given to an "understanding"[42]

Purpose or Effect

If the court finds any of the above forms of collusion, it must determine the purpose or effect, or likely effect, of that action. In this regard the courts will construe purpose in a similar way to section 36, but finding anti-competitive purpose under that section need not establish purpose under section 27.[43]

Besides purpose, the court should consider the actual or likely effect of the agreement. An effect test looks at how the contract or understanding influences competition. The courts have had little difficulty interpreting actual effect, but have had greater difficulty determining likely effect. This difficulty relates to the interpretation of likely, specifically the threshold required before a contract or understanding will have the effect of lessening competition.[44]

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38. Ibid, pp 643-644.

39. For further discussion concerning the difficulties of establishing an arrangement or understanding see Pengilley W., 'Deregulation or Re-Regulation?,' in Corones S.G. ed., *Competition Policy in Telecommunications and Aviation,* The Federation Press, Sydney, 1992, pp 111-178, at 126-128.

40. *L Grollo & Co Pty Ltd v Nu-Staff Decorating Pty Ltd,* (1978) ATPR 40-086, at 17,842.

41. See *Re British Basic Slag Ltd's Application,* (1962) LR 3 RP 178, *affirmed* (1963) LR 4 RP 116 (CA).

42. See *Trade Practices Commission v TNT Management Pty Ltd,* (1985) ATPR 40-512, at 46,098. Franki J states: *'[I] would not necessarily reject a proposition that the requirements for entering into an understanding may be somewhat different and more easily satisfied than the requirements for making an arrangement'.*

43. *Union Shipping* (1990) 2 NZLR 662; 3 NZBLC 101,618.

44. See *Air New Zealand v Commerce Commission,* (1985) 2 NZLR 338. Also *Mobil Oil Corporation v The Queen in Right of New Zealand* (International Centre for Settlement of Investment Disputes, Washington DC, Case ARB/87/2, 2 May 1989, International Arbitral Tribunal). Also *Broadcast Communications Ltd v Commerce Commission,* (1991) 3 NZBLC 102,391.

Substantial

Once either purpose or effect have been found, the court must consider whether the contract, arrangement or understanding "substantially" lessens competition. Section 2(1A) of the Commerce Act provides some guidance by defining substantial to be *`real or of substance'*. This section was interpreted by the Commerce Commission to mean:[45]

> ... it seems reasonable to assume that "real or of substance" in New Zealand was intended to mean not insignificant, not ephemeral, not nominal or minimal. Of course, as Deane J says, such a test conceals a lack of precision. In this respect, the evaluation of the question of degree, based on the criterion of "not insignificant, ephemeral, nominal or minimal" must be a matter of judgment for the appropriate adjudicating body.[46]

Lessening Competition

Finally, to establish liability competition must have been lessened substantially. To this end the courts have sought to determine the effect of the contract, arrangement or understanding on competition and whether that effect is substantial. Smithers J explains:

> To apply the concept of substantially lessening competition in a market, it is necessary to assess the nature and extent of the market, the probable nature and extent of competition which would exist therein but for the conduct in question, the way the market operates and the nature and extent of the contemplated lessening. To my mind one must look at the relevant significant portion of the market, ask oneself how and to what extent there would have been competition therein but for the conduct, assess what is left and determine whether what has been lost in relation to what would have been, is seen to be a substantial lessening of competition.[47]

When assessing how the contract etc. will affect competition, the courts have examined factors like market share, barriers to entry, and product differentiation. Consideration has also been given to the character and extent of vertical relationships; how independent the parties to those relationships are; and whether individual companies have market power.[48] The Commerce Commission and the courts have also considered the contract's etc. net competitive

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45. The Commission's interpretation was subsequently affirmed by the High Court in *Fisher & Paykel v Commerce Commission*, (1990) 3 NZBLC 101,655.

46. *Re Weddel Crown Corp Ltd*, (1987) 1 NZBLC (Com) 104,200. Also *Re Fisher & Paykel Ltd (No 2)*, (1989) 2 NZBLC (Com) 104,377.

47. *Dandy Power Equipment Pty Ltd v Mercury Marine Pty Ltd*, (1982) ATPR 40-315, at 43,887-8. He goes further to state: *'Although the words " substantially lessened in a market" refer generally to a market, it is the degree to which competition has been lessened which is critical, not the proportion of that lessening to the whole of the competition which exists in the total market. Thus a lessening in a significant section of the market, if a substantial lessening of otherwise active competition may, according to circumstances, be a substantial lessening of competition'.*

48. See Pengilley, supra, note 39, pp 124-126.

effect when determining a substantial lessening of competition.[49] Under the Commerce Act the Commission can, for public benefit reasons, authorise an act that would otherwise breach section 27 (for authorisation procedures see chapter 7).[50]

5.6 Natural Monopoly Application

Economic liberalisation and commercialisation have increased the reliance placed on the restrictive trade practice provisions of the Commerce Act to control the behaviour of natural monopolies. This discussion will examine whether section 36 can provide competitors non-discriminatory access to essential facilities should their own negotiation fail. For this reason section 36 becomes vital to the liberalisation process because failure to gain "fair and reasonable" access will prevent competition and so maintain or strengthen the "effective" monopoly. Following that discussion I will examine the application of section 27 to this process. This later examination will be brief because section 36 provides the basis for facility access.

Section 36

Generally, similar dominance issues will face a facility based natural monopolist as compared to any other firm with market power. For example, the monopolist may be able to predatory price, engage in non-price or price predation; therefore I delay discussion of these issues to chapters nine and eleven when I evaluate them with respect to the telecommunications industry. However, special problems exist with a natural monopolist that refuses to deal with competitors. I will discuss this problem by considering whether antitrust can grant access to these competitors, then whether it can resolve the terms of access.

a) Natural Monopoly Access

Historically, firms have been penalised for refusing to deal when that refusal sought *`to create or maintain a monopoly'*.[51] Natural monopolies should face a similar standard because a monopolist's refusal to deal may extend its monopoly into markets where competition, or the potential for competition exists. The monopolist will achieve this by foreclosing supply, or

[49]. See *Re Fisher & Paykel*, (1989) 2 NZBLC (Com) 104,377, at 104,395.

[50]. See Pengilley, supra, note 39, pp 170-175. Also, van Roy Y., *Guidebook to New Zealand Competition Laws*, second edition, Commerce Clearing House, Auckland, 1991, chapter 10.

[51]. *United States v Colgate & Co* (1919) 250 US 300, at 307.

providing discriminatory access to the monopoly market.[52] This refusal will create a barrier to competition because only one firm can supply the natural monopoly output at least cost (although the extent to which the refusal is a barrier will depend on other barriers to entry and the substitutability of supply).[53]

To rectify this problem the Government should promote competition by allowing competitors "fair and reasonable" access to such facilities - in other words, non-discriminatory access.[54] While such access will impinge on an owner's property rights, that loss must be weighed against the ability of the monopolist to maximise profit and distort related market investment. Counsel for Clear Communications explains:

> ... section 36 constrain[s] one's freedom to use one's own property as one wishes. And this is particularly the case when one is a monopoly. The outcome of applying the language of section 36 is that it can result in a property owner being forced to share property at a price which the owner finds unsatisfactory. That is simply one of the burdens of enjoying a huge accumulation of "property".[55]

The extent to which property rights are invaded will depend on the breadth of application of section 36. To minimise breadth the courts should only grant access when a natural monopoly exists, otherwise replication can occur efficiently.

Given the desirability of access, can competitors use section 36 to provide access when a monopolist's refusal has an anti-competitive purpose? A leading Australian commentator, Dr Warren Pengilley believes so; with reference to the Australian situation he comments:

> If Telecom were not exempt from the Trade Practices Act and were not given monopoly status under the Telecommunications Act, a denial of access to a competitive carrier would be a clear case of the denial of access to an 'essential facility', which would breach s. 46 of the Trade Practices Act [section 36 of the Commerce Act] covering misuse of market power. The denial would be the taking advantage of a position of substantial degree of market power for the purpose of preventing entry to a market or preventing of deterring a person from engaging in competitive conduct in a market.[56]

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52. The refusal must only relate to facilities. It should not relate to the supply of goods because if refused supply, those goods, assuming tariff reductions, could be sourced from overseas.

53. See Tye W.B., 'Competitive Access: A Comparative Industry Approach to the Essential Facility Doctrine,' *Energy Law Journal*, vol 8, 1987, p 337.

54. See Jarden Morgan NZ Limited, *Regulatory Issues Relating to Privatisation*, Report for Telecom Corporation of New Zealand, August 1989, p 80. For example, fair and reasonable terms will exist when the monopolist prices access on the cost of provision. The entrant, on the other hand, should be able to obtain the quality of service required.

55. *Clear Communications Limited v Telecom Corporation of New Zealand Limited & Ors*, CP No 590/91, Clear's closing submissions to the High Court, at 43-44.

56. Pengilley W., 'The Exclusion of Competitive Carriers,' in Armstrong M. ed., *Telecommunications Law: Australian Perspectives*, Media Arm, Melbourne, 1990, pp 291-309, at 303.

The New Zealand High Courts has accepted this type of reasoning. In *Auckland Regional Authority v Mutual Rental Cars* Barker J discussed the issue of access to essential facilities. In that case the Auckland Regional Authority (ARA) refused to grant Budget Rental Cars airport kiosk space. It did this so that it could maximise revenue from the kiosk space it rented.[57] Counsel for Budget submitted that the Authority:

> ... was in a dominant position in the market for granting rental car concessions [at Auckland Airport] and was prevented [by the Act] from using that position to prevent effective competition.[58]

Barker J determined the relevant markets were (1) concessions for rental car operators at Auckland Airport and (2), the market for hiring cars at Auckland Airport. With these definitions he concluded that the ARA had a dominant position in the first market, which it had used for the purpose of preventing entry in the secondary market. Barker J explains:

> Although ARA's motive may have been to maximise rent, by accepting only two rental car operators, its means was the use of its dominant position to exclude competitors of the successful concessionaires. The collateral contracts therefore had the purpose of excluding other potential concessionaires.[59]

The need for facility access was also briefly discussed by the High Court in *Telecom v Commerce Commission.*[60] Although that case concerned the allocation of radio frequency rights, the members of the Court discussed the possibility that Telecom could foreclose competition by limiting access to the natural monopoly portion of the telephone network. When explaining this potential the Court implies that it would grant access if it was initially denied by Telecom. The Court explains:

> Although the legal barrier to network operation was removed in 1989, barriers to entry to network operation are substantial. There are known to be large economies of scale and scope, with diseconomies, in particular, in duplicating the local loops. Telecom has built up its network gradually but a potential entrant to network operation is faced with very large investments in transmission facilities and rights of way unless, as in the case of Clear, it can gain access to existing facilities such as the New Zealand Railways fibre link. There is the necessity to obtain interconnection with the PSTN (and international transmission) on terms that are not unduly disadvantageous. The most daunting of these barriers is the dependency upon Telecom's PSTN ...[61]

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57. *Auckland Regional Authority v Mutual Rental Cars (Auckland Airport) Limited & Ors* (1988) 2 NZBLC 103,041. Also see *Chatham Islands Fishermans Co-operative Company Ltd v Chatham Islands Packing Company Ltd and anor* (1988) CP 874/88.

58. *Auckland Regional Authority,* (1988) 2 NZBLC 103,041, at 103,042.

59. Ibid, at 103,070.

60. *Telecom Corporation,* (1991) 3 NZBLC 102,340.

61. Ibid, at 102,377.

From these judgments it seems that New Zealand courts will grant an aggrieved party facility access if it has been denied in the first instance. Of course the appropriateness of doing so will depend on the court's definition of market, for that definition will determine whether the threshold level of dominance has been met. For example, if the court defines market too narrowly it could grant access when it was not warranted. This will occur because the market definition will overstate dominance.

Besides the delineation of market, the court should consider the notion that just because a natural monopolist has a facility does not mean competitors require access to that facility to compete. For example, a freight operator does not have to rely on access to New Zealand Rail's track network to shift freight from Auckland to Wellington - that operator can use the road system. Finally, just because a monopolist refuses access when in a dominant position does not mean the action was anti-competitive - the refusal may have another purpose. Therefore market definition will be the determining factor on whether the court grants access appropriately. In this regard the courts should not only consider the issue of substitutability when defining market. In other words, they should consider `*what definition of market will best assist in analysing the processes of competition relevant to the case?*[62]

b) The Terms of Access

It would seem that section 36 has the potential to allow competitors access to facilities. However, access may not be enough because negotiating parties may ask the court to rule on the terms of access. Again the court will consider these terms under section 36 and must provide relief if it considers the terms breach the section. In this regard the court has wide powers under part six of the Commerce Act to grant injunctive and damage relief.

When granting relief Australasian courts, on final judgment, have generally been reluctant to set the price and the terms at which supply will take place.[63] In *Union Shipping* the plaintiff asked the High Court to rule on a charge that Port Nelson (PNL) had levied on them and some

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62. Norman N.R., and Williams P.L., 'Analysis of Market and Competition Under the Trade Practices Act: Towards the Resolution of Some Hitherto Unresolved Issues,' *Australian Business Law Review,* vol 11, 1983, p 400. Also see Brunt, supra, note 20, p 122. Brunt comments that *'an appropriate specification of the market concept in the development of our law can come only by a preliminary and systematic exploration of the meaning of market power and competition'.* Also pp 149-152.

63. See Wright R., 'Injunctive Relief in Cases of Refusal to Supply,' *Australian Business Law Review,* vol 19, 1991, pp 65-97, at 65.

other port users.[64] PNL levied this charge because it was concerned that waterfront reform would leave its staff and equipment under utilized. This charge was levied on top of a *wharfage charge* that PNL already billed its competitors. Union Shipping (USL) and its stevedoring subsidiary (USSL) opposed this charge by alleging that PNL had an anti-competitive purpose:

> PNL action in requiring USSL to pay wharfage containing a handling component (forklift hire) whether or not the forklift is used, and to pay the user levy as pleaded had the purpose of restricting entry/preventing or deterring competitive conduct in/eliminating others from, stated markets.[65]

The Court examined the accounting records of PNL to determine whether the access terms were fair and reasonable. When assessing the *wharfage charge* the Court criticised the detail associated with the items included in cost, their weights in that cost and the accounting procedures used to determine cost.[66] The uncertainty surrounding the calculation of the charge gave the Court little guidance in determining whether it was of an anti-competitive nature. To determine this other evidence was considered. The Court noted:

> ... the wharf user levy was charged only against stevedores using their own plant and labour. It was not charged to the Apple and Pear Marketing Board, which sent its own straddles on to the wharf to deliver fruit; Owens which sent large log carriers on to the wharf to deliver logs; or truckers who trucked fish and other goods on to the wharf alongside vessels. The distinction is curious. If the object of the levy genuinely was to compensate the Board for use of surface areas, logically users would be charged. Possibly, there was a policy of direct discrimination. PNL was more than a little sensitive at hearing such suggestions. Possibly, use of wharf surface in fact is covered adequately by wharfage charged on goods moved; in which case the wharf user levy may contain elements of double recovery.[67]

The Court found that PNL's user levy breached section 36. By way of relief the Court decided not to set price and conditions of access. Instead, it advised but did not order PNL to adopt appropriate accounting policies. These policies, it believed, would allow PNL to charge its competitors fair and reasonable access for the services they required. Because of this, the Court reserved the issue of cost and damage relief until PNL had completed this process.[68]

The Australian courts, however, have shown an inclination to set the price and terms of supply. In *Queensland Wire*, the High Court - after first finding that BHP had prevented market entry by refusing to deal with QWI - remitted the matter of remedy back to the trial

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64. *Union Shipping* (1990) 2 NZLR 662; 3 NZBLC 101,618.

65. Ibid, at 101,622.

66. Ibid, at 101,628.

67. Ibid, at 101,634.

68. Ibid, at 101,654. Also see *Clear Communications*, CP No 590/91, Clear's closing submissions to the High Court, at 155, para 485. Counsel for Clear discount the appropriateness of the relief adopted in PNL. Counsel suggest that *'no practical result has yet emerged in terms of the proper cost accounting exercise suggested in that case in over two years'.*

Court. Before the trial Court hearing, BHP and QWI reached an agreement for the supply of Y-bar.[69] Rather than remit the matter of settlement, the trial Court, in *ASX Operations v Pont,* was prepared to tackle the issue of price. The case concerned the supply of an electronic signal, which contained stock exchange information. Pont alleged that ASX was using its market power to supply that signal on restricted terms and at an inflated price. In reaching this conclusion the trial Judge, Wilcox J, ordered the drastic alteration of ASX's pricing structure. He reasoned:

> Once it is accepted that ASXO is not entitled to misuse its monopoly position, it ought not to be regarded as unfair to compel ASXO to supply Signal C at a price which reflects the cost of supplying that signal together with a margin of profit similar to that charged by competitive suppliers in the data industry. I accept that such a price is likely to be low, compared with the fees charged in the subject contracts. But that is because the cost of supply is low. In a competitive situation, that low cost would be reflected in a low price.[70]

The Full Court of the Federal Court of Australia (before Lockhart, Gummow and von Doussa JJ) set this order aside. It did this because its members did not consider that the court was the appropriate forum to set contract price, as setting price today would require the court to supervise that price tomorrow.[71] Their Honours comment:

> ... s 46 does not strike at "monopolists" or those in a "monopolistic position". Nor does it look to the attainment of a commercially "reasonable" result. It asks whether a corporation has a substantial degree of power in a market and then proscribes the taking advantage of that power for certain purposes. Therefore, there is no contravention of that provision by a corporation with a substantial degree of power in the market which it uses to obtain a particular price, provided that in doing so the corporation has not taken advantage of its powers for a proscribed purpose.[72]

By way of relief the Court ordered Pont to pay ASXO a price based on the rate in the previous contract between the two organisations.[73] The Court, however, expected that Pont and ASX would then enter into fresh negotiation.[74] Similarly, the Full Federal Court, in *Eastern Express,* was reluctant to make orders that interfered with competitive activity.

> This Court should be vigilant to ensure that its jurisdiction is not invoked to interfere with normal and legitimate competitive pricing activities in the relevant market under the guise that such activities are predatory. The respondents submitted that, in the context of the particular circumstances of this case,

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69. *Queensland Wire,* (1989) ATPR 40-925, at 50,025. See Pengilley, supra, note 39, p 138. He comments that: *'subsequent to the High Court proceedings, supply conditions were negotiated between BHP and Queensland Wire and supply of Y-bar feedstock was granted'.* Also see Wright, supra, note 63 and Pengilley, supra, note 31.

70. See *Pont Data Australia Limited v ASX Operations Pty Limited,* (1990) 93 ALR 523, at 564.

71. See *ASX Operations Pty Limited & Anor v Pont Data Australia Limited,* (1991) ATPR 41-069, at 52,071. Also see *ASX Operations,* (1991) ATPR 41-109.

72. *ASX Operations,* (1991) ATPR 41-109, at 52,666. From this judgment one can argue that monopoly pricing will not be a sin under section 46 (section 36 of the Commerce Act). For that to occur the monopolist must charge a discriminatory price.

73. Ibid, at 52,667.

74. Ibid, at 52,668. Also see Pengilley, supra, note 31, p 236.

> particularly when consideration was given to the relief claimed in the Notice of Appeal, there would be considerable difficulties in formulating appropriate orders to prohibit the alleged contravention of s 46. Counsel submitted that, in substance, the Court was being asked to interfere with normal and legitimate price competition. In the light of our earlier findings, it is not necessary to further consider this submission; it is sufficient to say that we see *considerable force* in it.[75]

From this summary, it can be seen that Australasian courts - following the High Court's decision in *Queensland Wire* and the trial Court's decision in *ASX Operations* - have been reluctant to grant injunctions that set the price and terms of supply. Essentially, the courts are concerned - and quite rightly so - that the resulting rate will interfere with the competitive process or that setting the rate will give it a continuing supervision (regulatory) role. However, Wright sees the value of injunctive relief in certain circumstances. He argues:

> ... the position in the United States appears to be that there are various compulsory dealing orders which are practical and effective remedies depending on the circumstances. First, a simple dealing order to supply or deal on a non-discriminatory basis may be effective where the monopolist is not vertically integrated. Secondly, where the monopolist is vertically integrated, a dealing order can be effective if prices are supervised and regulated by a statutory body charged with this function. Thirdly, again in the case of a vertically integrated monopolist, if there is some history of dealing between the parties or some comparable market price, the court may use this to regulate or supervise the price at which the monopolist should deal, at least as a short term remedy. However, there is also the recognition that in some cases it may not be possible or appropriate to impose a compulsory dealing order. This recognition is based in part on whether the court can effectively implement its order.[76]

Obviously when applied to a natural monopoly, that monopoly will most likely be vertically integrated. Therefore if there is no history of dealing, or a comparable market price does not exist, injunctive relief will be difficult to formulate. Difficulty relates to the courts inability to set and maintain an appropriate price.[77] For this reason decisions relating to the price and terms of supply are perhaps more appropriately left to regulators.[78] However, this need not be so because the courts could still have a role in this process. Injunctive relief could direct the dominant party toward a type of pricing (ie. non discriminatory or cost based pricing). The court could even use injunctions to prevent - rather than impose - the dominant party placing certain requirements in an access agreement. Finally, the court could burden the

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75. *Eastern Express Pty Limited v General Newspapers Pty Limited & Ors*, (1992) ATPR 41-167, at 40,308.

76. See Wright, supra, note 63, at 76.

77. Ibid, pp 87-97. For full discussion see Pengilley, supra, note 31, p 244. Pengilley comments on court orders when there has been no prior history of supply and when there is no market price. *'In those circumstances, United States courts have bailed out of the argument, as was noted by Justice Pincus at trial in Queensland Wire. The Australian courts have not. Presumably, therefore, we have to analyse the situation as did Justice Wilcox at trial in Pont Data, that is, that the "reasonable" supply price is based on "cost" plus a reasonable margin. But the problems of what is "cost" and what is a "reasonable margin" are almost insurmountable'.*

78. Pengilley, ibid, p 254.

dominant party with punitive damages in the hope that they would force the dominant party to comply. Threatening to impose damages for non-conformity could force the dominant party to comply with the threat of the court to impose injunctive relief.

c) Summary

These decisions indicate that the courts are prepared to grant access, and then consider the terms of access. While the first requirement seems straightforward, it remains to be seen whether the courts can provide adequate injunctive and damage remedy when access terms are anti-competitive. Such remedy should not limit the ability of the dominant party to act in a "competitive" manner.[79]

Section 27

Once an agreement has been reached, section 27 will apply to the contract's terms assuming these terms have not received the sanction of the Court. One would generally expect an aggrieved third party to question the terms. For example, the High Court, in *Auckland Regional Authority,* was asked by Budget to assess the validity of a contract between the Authority and two other rental car operators. This contract limited Budget's access to kiosk space at Auckland domestic and international airports.[80] Baker J was receptive to Budget's claim for he believed the contract had the purpose and effect of substantially lessening competition. By way of relief he set the contract aside.[81]

As well as third party action, a party to that contract may likewise claim a substantial lessening of competition. Such action was seen in *ASX Operations v Pont* where Pont asked the Full Federal Court to rule on a contract signed under duress.[82] The Court was receptive to this request. So this section, along with section 36, allows the courts to determine whether an agreement's terms are fair and reasonable.

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79. *Clear Communications,* CP No 590/91, pp 161-165. Telecom, in their closing submissions, discuss the difficulty of the Court making "commercial" orders.

80. *Auckland Regional Authority,* (1988) 2 NZBLC 103,041, at 103,042.

81. Ibid, at 103,068.

82. *ASX Operations,* (1991) ATPR 41-069, at 52,059.

Summary

Under New Zealand's light-handed regulatory approach, section 36 has a vital role of first ensuring access and, secondly, along with section 27, ensuring that the terms of access are fair and reasonable. However, this process places tremendous cost on the plaintiff because a heavy burden of proof is placed on that party. Costs also arise because the sparse nature of case law makes application of the section uncertain. For these reasons I now discuss possible modifications to section 36 to increase the certainty of response.

5.7 Modifications to Section 36

By relying on the courts, rather than industry specific regulation, the Government has shifted the cost of regulation onto the parties rather than the state. The Government justifies this approach because it believes that if parties benefit from legal action, they should pay the costs of obtaining those benefits. While on efficiency grounds the user should pay for benefits received, the monopolist will always have an incentive to delay negotiations to the court to preserve or even enhance a dominant position. Such delay will increase the cost of obtaining relief - a cost that already falls disproportionately on the plaintiff because it must prove the anti-competitive nature of an act. These costs will, in turn, force smaller companies out of the industry because they will be less likely to seek redress.[83]

To limit delay and cost, the Government should reduce the time taken to get proceedings into court and the time spent in court. While the courts will still require time to reach a quality decision, Stevenson suggests the streamlining of the court process:

> What is probably required is the re-examination of the Rules governing management of legal proceedings, greater prioritisation of proceedings with significant economic consequences, the dedication of more judges to specialist commercial jurisdictions, extension of the use of lay assessors and possible court ordered mediation processes. Equally important is the need for legal practitioners to look at their own approach to litigation and their procedures.[84]

The incidence of cost will also be a determining factor of whether smaller parties take action against a dominant party. Currently the burden of proof rests with the plaintiff.

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83. See *Telecom Corporation of NZ Ltd v Commerce Commission & Ors,* (1991) 3 NZBLC 102,340. This case concerned the allocation of radio frequencies to Telecom and the refusal of the Commerce Commission to grant Telecom clearance or authorisation for those frequencies. When appealing that decision not all tendering parties took part in the appeal process. It could be argued that those parties did not want to face the cost of the court-led inquiry.

84. Stevenson, supra, note 6, p 5.

However, that burden will be reduced or even reversed with section modifications, while modification may even make section 36 more certain with regard to access. When considering modification I will first look at the "essential facilities doctrine", followed by the advantages of an effect over a purpose test, then whether promoting efficiency over competition will improve the section's application. Finally, should these measures fail, I will briefly discuss industry specific forms of regulation.

The Essential Facilities Doctrine

The essential facilities doctrine emerged from United States case law to aid in determining whether a propriety company should be obliged to provide facility access.[85] The Supreme Court's decision, in *US v Terminal Railroad,* was the first to grant access on *`just and reasonable'* terms so that those terms would place any non-propriety company *`on [or near to] a plane of equality'* with proprietary companies.[86] Subsequent cases have reaffirmed this decision,[87] but the doctrine was not specifically identified until the District of Columbia Court of Appeals, in *Hecht v Pro Football League*, held:

> ... that where facilities cannot practicably be duplicated by would-be competitors, those in possession of them must allow them to be shared on fair terms.[88]

However, the Court went further to effectively limit the doctrine's application to natural monopolies. It did this by establishing a practical duplication test:

> To be 'essential' a facility need not be indispensable; it is sufficient if duplication of the facility would be **economically infeasible** [emphasis added] and if denial of its use inflicts a severe handicap on potential market entrants.[89]

The Seventh Circuit Appeals Court in *MCI Communications v American Telephone and Telegraph Co* developed the essential facility standard by establishing an access test. The requirements of the test were that if a monopolist controls an essential facility and a competitor cannot practicably or reasonably duplicate that facility the Court will grant access provided

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85. For an overview of the doctrine see Werden G.J., 'The Law and Economics of the Essential Facility Doctrine,' *St Louis University Law Journal,* vol 32, 1987, pp 433-480.

86. *US v Terminal Railroad Association,* (1912) 224 US 383.

87. See *Associated Press v United States,* (1945) 326 US 1; *Gamco, Inc. v Providence Fruit & Produce Building Inc.,* 194 F.2d 484 (1st Cir), *cert, denied,* (1952) 344 US 817; and *United States v Otter Tail Power Co.,* (1971) 331 F. Supp. 54 (D. Minn.), *aff'd,* (1973) 410 US 366.

88. *Hecht v Pro Football League,* (1977) 570 F 2nd 982 DC Cir.

89. Ibid.

access is feasible (ie. there is no legitimate business or technical reason why it should not occur) and it has been denied to the competitor (or allowed but on restrictive terms).[90] These principles, in turn, have been confirmed by other American Courts.[91] Given the apparent use of the doctrine, can it provide similar assistance in Australasia?

The Australian Trade Practices Commission have recommended an amendment to the Trade Practices Act to incorporate the doctrine.[92] Lately this view has altered to one of court-led development within the bounds of existing legislation - an approach similar to that first adopted by New Zealand's Ministry of Commerce.[93] However, the judiciary have had difficulty determining whether it should incorporate the doctrine into section 36.

In *Queensland Wire Industries v BHP*, the Full Federal Court of Australia determined that the doctrine *`is not readily accommodated to the terms of section 46 itself, and it is those terms that govern this case'*.[94] The New Zealand courts, however, have been more inclined to accept the doctrine. Barker J, in *Auckland Regional Authority v Mutual Rental Cars*,[95] recognised the doctrine's significance, even if he seemed to apply the doctrine on erroneous grounds?[96]

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90. *MCI Communications v American Telephone and Telegraph Co.*, 708 F.2d 1081 (7th Cir.), cert. denied, 464 US 891 (1983).

91. *Aspen Highlands Skiing Corp. v Aspen Skiing Co.*, (1984) 738 F.2d 1509 (10th Cir.), affirmed, (1985) 472 US 585 (but on non-essential facility grounds); *United States v American Telephone and Telegraph Company*, (1981) 524 F. Supp. 1336 (DC. Cir.) and *Fishman v Estate of Wirtz*, (1986) 807 F.2d 520, 539-541 (7th Cir.).

92. Trade Practices Commission (TPC), *Misuse of Market Power*, Submission to the Inquiry into Mergers, Takeovers and Monopolies by the House of Representatives Standing Committee on Legal and Constitutional Affairs, August 1988. Also see Vautier K.M., *The "Essential Facilities Doctrine"*, Occasional Paper No.4, Commerce Commission, March 1990. She was critical of the TPC's approach because it did nothing to limit the doctrine's application.

93. See the Trade Practices Commission, *Section 46 of the Trade Practices Act: Misuse of Market Power*, A Background Paper, TPC, 1990, p 41 who perhaps altered their view based on the Griffiths Committee Report on *Mergers, Takeovers and Monopolies: Profiting from Competition*, 1989. Also see the Department of Trade and Industry, *Review of the Commerce Act 1986*, Discussion Paper, August, 1988, p. 34; and Ministry of Commerce, supra, note 2.

94. *Queensland Wire* (1987) ATPR 40-841. However there is doubt over whether the doctrine should have been applied to this case because the refusal to deal concerned the supply of a good and not access to a facility. See Pengilley W., 'The "Essential Facilities" Doctrine and the Federal Court,' *Australian & New Zealand Trade Practices Advertising and Marketing Law Bulletin*, Vol. 4(4), May 1988. Also, 'Denial of Supply and Misuse of Market Power in Australia: What follows from the High Court Decision in Queensland Wire?', *Special Report, Australian Trade Practices Reporter*, March 1989, CCH Australia Ltd.

95. *Auckland Regional Authority*, (1988) 2 NZBLC 103,041, at 103,042.

96. See Hampton, supra, note 16, p 775. He comments that *'some observers have argued that the case did not lend itself to the application of the doctrine: no monopoly leveraging was involved and the ARA did not compete on the second level of operation (the airport car rental market)'*. Also Blanchard C.G., *The Essential Facilities Doctrine: Can it be incorporated into Section 36 of the Commerce Act 1986?*, Unpublished MCom paper, University of Canterbury, 1991, chapter 3. He explains that the narrow framing of the second level market gave Budget facility access when it should not have been allowed under the doctrine.

Finally, the High Court, in *Union Shipping v Port Nelson,* took a more cautious view over the doctrine in that the Court *`hesitated to incorporate the doctrine "as is" into New Zealand competition law'*.[97] The members of the Court took this stance because they felt it prudent to exercise caution when adopting rules from other jurisdictions.

It would seem that within the current wording, the doctrine can fit into section 36. However, in making this statement the courts should not expand the application of the doctrine.[98] Therefore the Court should only grant access when a denial *`inflicts a severe handicap'* on potential or existing competitors.[99] The courts should not consider this denial on face value. They should instead consider the possibility that the denial was for a valid business reason. McGechan J, in *Union Shipping*, provided some guidance in this regard:

> The activity covered will not be prohibited, despite anti-competitive effects, if it arises for unrelated legitimate business reasons, without purposive pursuit of those anti-competitive outcomes in themselves.[100]

While true, the New Zealand courts will, under section 2(5), grant access if the refusal was in part for a valid business reason, but a substantial reason for the refusal was for an anti-competitive purpose. Either way the courts, by being prepared to recognise a valid business reason, shift the burden of proof onto the denier of access to prove legitimate reason. This shift, in turn, places some of the dispute costs on the dominant party.

Therefore the courts could incorporate the essential facilities doctrine into section 36 provided they construe the section narrowly. Inclusion would provide the courts and negotiating parties with greater certainty - certainty that would reduce the time spent in court.

Purpose or Effect

When determining liability, the courts have formulated section 36's purpose requirement by considering the intent of the defendant along with the condition that the plaintiff must prove

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97. *Union Shipping,* (1990) 2 NZLR 662; 3 NZBLC 101,618. While the doctrine was not adopted in this case the court left that option open by stating that *'[w]hile we do not adopt and apply the doctrine as such, nor do we ignore help which it may offer in achieving some sensible resolution."*

98. The Treasury, supra, note 9. This organisation is critical of introducing the concept of essential facility into competition law. They say *'it is not clear what it means and how it relates to the more familiar concept of "dominant firm"'*. They voice concern at the potential for the doctrine to be used on enterprises that are not in a dominant market position.

99. *Hecht,* (1977) 570 F 2nd 982.

100. *Union Shipping,* (1990) 2 NZLR 662; 3 NZBLC 101,618.

the defendant's object or aim.[101] This process places a heavy burden of proof on the plaintiff because he/she must establish motive. Besides the question of burden, establishing purpose will not require that the anti-competitive act was actually achieved, nor will it presume that the result was caused by an anti-competitive purpose. For these reasons the courts could form a solution irrespective of the effect the action has on market participants. In this way the solution may deviate from the standard of workable and effective competition.

To solve these problems, some have proposed replacing the purpose test with one based on actual or likely effect.[102] Alteration would enable the courts to establish solutions more in keeping with those that would have been obtained in a competitive market.[103] This would occur because an effect test captures conduct not caught by the current requirements, and would not penalise conduct if it failed to achieve an anti-competitive result. Likewise, an effect test would have the advantage of shifting the burden of proof onto the defendant because he/she would then have to justify his/her actions in light of the result.

Often courts will have some leeway to incorporate effect when constructing purpose because no direct evidence will exist concerning purpose. Mason CJ and Wilson J, in *Queensland Wire Industries v BHP,* did so by construing "taking advantage of" (use) objectively. Such construction pays more attention to likely effect rather than intent.[104] Their Honours comment:

> The question is simply whether a firm with a substantial degree of market power has used that power for a purpose proscribed in the section, thereby undermining competition, and the addition of a hostile intent inquiry would be superfluous and confusing.[105]

Other courts have taken a more subjective approach by considering intent to a greater extent than effect.[106] Heydon explains:

> There is a difference between proving purpose and proving likely effect, even if one is using the likely effect to support an inference of purpose. The Court need only use objective criteria to establish a 'likely

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101. *Eastern Express Pty,* (1992) ATPR 41-167, at 40,303. The Full Court comment *'"Purpose" in s 46 is not concerned directly with the effect of conduct, but with "purpose" in the sense of motivation and reason'.*

102. See Ministry of Commerce, *Review of the Commerce Act 1986,* Reports and Decisions, August 1989, p 11.

103. See Taperell G., 'Misuse of Market Power in Telecommunications: The Legislative Safeguards,' in Corones S.G. ed., *Competition Policy in Telecommunications and Aviation,* The Federation Press, Sydney, 1992, pp 179-197, at 196.

104. *Auckland Regional Authority,* (1988) 2 NZBLC 103,041.

105. *Queensland Wire,* (1989) ATPR 40-925, at 50-010.

106. New Zealand decisions include *Apple Fields Ltd v New Zealand Apple and Pear Marketing Board,* (1989) 2 NZBLC 103,564 and *New Zealand Magic Millions Ltd v Wrightson Bloodstock Ltd,* (1990) 1 NZLR 731, for subjective approaches to purpose.

> effect' but it must go further with purpose, which has a subjective element. All the usual evidentiary presumptions concerning purpose and intent will be available to assist in drawing the inference.[107]

As yet the New Zealand courts are undecided on the approach they will take, but are reluctant to construe purpose on entirely subjective grounds.[108] I believe the courts should move toward objective interpretation, for while subjective construction will not always give different results, an objective approach will provide a better means of assessing the actions of an essential facility owner who denies a competitor access.[109] The Sixth Circuit Appeals Court in *Byars v Bluff City News* were emphatic on this point. Its members explain:

> ... it is clear that what should matter is not the monopolist's state of mind, but the overall impact of the monopolist's practices. As preservation of competition is at the heart of the Sherman and Clayton Acts ... a practice should be deemed 'unfair' or 'predatory' only if it is *unreasonably* anti-competitive.[110]

However, when looking at effect the courts must be prepared to accept valid business reasons for a refusal. An objective construction could easily incorporate this test because the courts can assess surrounding circumstances when formulating purpose.

Competition or Efficiency

There has been much debate on what should be the objective of New Zealand's competition policy. The Department of Trade and Industry believed the Act should promote competition, which would in itself enhance economic efficiency.[111] But the Treasury favoured the promotion of efficiency because it was concerned that promoting competition could promote non-efficiency objectives.[112] Greer recognised both points of view, arguing that:

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107. Heydon, supra, note 14, at p 2036.

108. *Union Shipping* (1990) 2 NZLR 662; 3 NZBLC 101,618, at 101,048. McGechan J said: "*... we are reluctant to adopt an entirely subjective approach. As the development of the law of contract rather demonstrates, the commercial field is one in which objective ascertainment of states of mind has much to commend it. We would be sorry to see the objectives of s 36 inhibited by any undue subjectivity as to purpose, perhaps more natural to criminal law. However, ... we leave the question of principle open.*"

109. See Chapman J.D., 'The Monopolist's Refusal to Deal: An Argument for a Rule of Reason,' *Texas Law Review*, vol 59, 1981. The author is critical of the intent based test. Instead, he sees an effect test as a better method of assessing whether an act is anti-competitive.

110. *Byars v Bluff City News Co.*, (1979) 609 F.2d 843 (6th Cir), at 856.

111. Department of Trade and Industry, surpa, note 93, p 12.

112. Ministry of Commerce, supra, note 102, p 4.

> ... maintaining competition and static efficiency share much in common, but there is also more dissonance between them than between competition and any other goal we have surveyed. In effect, competition resolves conflicts between static efficiency and the other goals in favour of the other goals.[113]

When related to natural monopolies, competition policy should maintain the most efficient means of production. In global markets, promoting competition will maintain this structure because only the threat of entry and not actual entry will occur (unless of course the monopoly invites it by taking advantage of its position, refer chapter 3). Promoting competition in a local setting will not maintain an efficient structure because the cost structures within the industry will invite entry irrespective of whether the monopoly takes advantage of its position.[114] This will change if the Act promotes efficiency, but this could cause productive and allocative inefficiencies because the defendant could use efficiency justifications to defend conduct deterring entry. Finally, efficiency will result by promoting competition in "related markets" provided the terms of access are fair and reasonable. If the terms fail on this count, the entrant could seek recourse irrespective of whether the Act promoted competition or efficiency. However, if the Act promoted competition the terms will probably be non-discriminatory, while if it promoted efficiency, these terms will more likely be based on cost.

In general, promoting competition and efficiency coincide, except that promoting competition achieves long-run efficiencies while promoting efficiency will achieve these in the short-run with less "inefficient" investment. However, the market rather than the courts should determine "what is efficient" because then the Courts do not have to make a value judgement.[115] This policy will, except where local natural monopolies exist, provide long-run efficiencies. For this reason the Government could compromise policy. Greer explains:

> ... attempt[s] to maintain competition except insofar as that effort is judged to be too costly in terms of lost efficiency, production and innovation efficiencies in particular. This would be a 'yes-but' policy.[116]

To an extent such compromise exists already under part five's authorisation test; however, such authorisations are not available for a section 36 breach. Therefore inefficient investment may result, but the Government should tolerate such investment if local monopolies are not

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113. Greer D.F., *Efficiency and Competition: Alternative, Complementary or Conflicting Objectives,* NZIER Research Monograph 47, March 1989, p 27. These objectives are reviewed in Greer pp 6-22. They include efficiency, consumer welfare, maintaining competition, fair conduct, equitable distribution, and political-social goals.

114. For proof see chapter three, section 3.3.

115. See Pengilley, supra, note 31, p 254. He is critical of the court's ability to appropriately regulate.

116. Greer, supra, note 113, p 36.

distinguishable from global, and to the extent that "inefficient" investment could benefit efficiencies generally. Consequently the existing objective may prove satisfactory.

Specific Regulation

If antitrust law does not provide competitors fair and reasonable access to essential facilities, the Government has a number of policy options. It could issue a policy statement under section 26 that directed the Commerce Commission to more actively investigate the granting of, and the terms of access. However, these statements only influence the Commission and not the court. For this reason the Government should consider statutory amendment,[117] or industry specific forms of regulation. Taperell comments on the place of these reforms in relation to general antitrust law:

> It would be ideal to have the [Trade Practices Act] as a law of general application not tailored to particular industries with uniformity in the administration and enforcement of the law through the Trade Practices Commission, Trade Practices Tribunal and the Federal Court. Unfortunately the limited scope of s 46 and the difficulties and uncertainties as to the relief available, indicate specific measures ... are necessary if effective competition is to be achieved.[118]

In this light the Ministry of Commerce has suggested that information disclosures will improve the application of the Commerce Act. Should these not work, it has also suggested that designating facilities as "essential" will provide competitors with greater access certainty. Similarly, empowering the Commerce Commission to govern the terms of access will help with any problems associated with relief. Finally, the Ministry considered separating monopoly facilities from areas with competitive potential.[119]

Summary

The Government should use Section 36 of the Commerce Act as the primary mechanism to grant competitors facility access should negotiation fail. Similarly, section 36 should also be used to ensure that the terms of access are both fair and reasonable. The essential facilities doctrine could augment this section to provide guidance about when competitors have the right of facility access.

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117. Vautier, supra, note 92, pp 28-30. She comments that the Australian Trade Practices Commission proposed amendment to ensure essential facilities access.

118. Taperell, supra, note 103, p 197.

119. Ministry of Commerce, supra, note 2, pp 23-25.

With these principles in mind, I believe the court could improve the section's application if purpose was construed on objective rather than subjective grounds. This development would only find the defendant liable when the act was anti-competitive and not so when it was only its intention. The section's application would also improve if the Act's objective changed from promoting competition to promoting efficiency. Finally, if the courts do not or cannot use the section to grant fair and reasonable access, the Government should consider industry specific forms of regulation.

5.8 Conclusion

This chapter considered the rationale for selecting antitrust law as the primary regulator of access to essential facilities. The Government has expressed the view that competitors should use current legislation in the first instance because of the problems associated with industry specific regulation and the lack of certainty provided by a threat. Using this legislation would also have the advantage of making the parties under dispute pay for resolution. However, at the same time the Government has recognised the limitations of antitrust law and has issued a threat to amend the Act if it does not prove effective.

Section 36 is the instrument relied upon to find liability when a party with market dominance uses that dominance for the purpose of restricting, preventing or eliminating competition in a market. This wording readily allows courts to grant an aggrieved party access should the act of the facility owner fall within its bounds. Several modifications and improvements that could enhance the application of the section to natural monopoly access, both generally and specifically, were discussed.

Chapter Six
Price Control

6.1 Introduction

If a threat does not prevent a natural monopolist from exploiting "end-of-the-line" consumers, the Government should consider using price control to limit that potential. The Government could also use price control to price facility access or to prevent the monopolist from predatory pricing. For these reasons a price control represents a "heavy-handed" form of regulation because the control places a direct limit on the ability of the monopolist to exploit other parties.

This chapter will consider why and when the Government should use price controls, then once the decision has been made to use a control, how it should implement the chosen control. I will then examine what options the Government has to regulate price. These options will include rate of return regulation, price capping and incentive styled controls.

6.2 The Need for and Use of Price Controls

Historically, the New Zealand Government has used price controls to *`promote price stability and protect the consumer against unreasonable price increases and profiteering'*, irrespective of the potential for market competition.[1] With the rise of micro-economic thinking, the Government removed many of these controls because it thought unfettered competition would more effectively promote efficiency. While deregulating markets may promote efficiency, the Government may still need price control where competition cannot exist. For example, it may use controls with a natural monopoly. The controls would prevent above cost pricing in monopoly markets; price the terms of access to the monopoly market; and

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1. Cliff C.E., 'Price Control and Profitability Assessment Under the Commerce Act 1975,' *Canterbury Law Review*, Vol 2, 1983, pp 134-6.

prevent predatory pricing in competitive markets. Of course the need for the control will depend on the power of the monopolist to extract profits from the monopoly?

In New Zealand, public ownership of natural monopolies has always limited their power to exploit. However, privatisation created a need for other forms of control. Some control was provided by increasing the level of market contestability (ie. by abolishing statutory barriers to entry); relying on the threat of additional regulation to control pockets of power; and by providing greater regulatory certainty in competitive markets with the Commerce Act. However, not all countries followed this path with their privatisation programmes. The British, for example, did not remove all statutory barriers nor promote competition to the same extent as New Zealand. Instead, they decided to explicitly regulate activity by using price controls to promote efficiency. Veljanovski wrote:

> ... the Government's privatisation programme has sacrificed the goal of greater competition and of introducing more market forces to the expediency of short-term considerations and that the programme relies to an excessive extent on the unproven ability of regulation to do what the market would have achieved costlessly.[3]

From this experience, the need for price control would seem to depend on the level of market contestability. By opting for contestability, the New Zealand Government has not considered price controls as an appropriate way of promoting efficiency because it thinks they:

> ... [are] a poor substitute for a competitive market [because when] setting prices, a regulator cannot properly take into account differences in the quality of the product or service being provided or such matters as supply conditions etc. These are all determined efficiently by a properly working competitive market.[4]

However, a need for price control could still exist where the Government cannot increase a market's contestability. Section 36 will reduce this need in "related markets" and have the advantage of pushing the price of resolution onto affected parties. However, that section will not prevent this practice in monopoly markets. Therefore the Government should consider protecting consumers by using price controls in monopoly markets. The Government should initiate and pay for this control because fragmented consumers or consumer groups do not have the resources or the ability to take or pay for this action.

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2. Note that contestability is a very broad term. Market contestability will increase by lowering barriers to entry. These include the removal of statutory barriers, the use of robust antitrust laws and/or the structural separation of a company.

3. Veljanovski C. ed., 'Forward,' *Privatisation and Competition: A Market Prospectus,* The Institute of Economic Affairs, London, 1989, viii.

4. The Commerce Commission, *Town Milk: Competition, Prices and Regulation,* A Discussion Paper, Wellington, 1991, p 20.

As well as monopoly markets, controls may also extend into competitive markets if the Government cannot delineate those markets from a monopoly market. Similarly, controls will cover competitive markets to provide the monopolist with less incentive to evade the control by shifting costs from competitive to monopoly markets.[5] However, by extending coverage, or by even imposing them at all, the control could tend toward a long-term rather than short-term solution to a lack of current competition. This will occur because limiting price now will provide less incentive for a competitor to enter that market.[6]

If price controls are required, the Government should only use them if they create "substantial" net economic benefits. The Commerce Commission explains:

> Prices are the signals which guide the use of resources in an economy. If the signals are wrong, distortions will be introduced and there could be harm to the economy. So price control is not something to be introduced lightly, and compelling justification for its imposition will be needed before any such recommendation is made.[7]

Such benefits include the elimination of cross-subsidisation, price discrimination, super-normal profiteering and promoting efficient pricing. Costs, on the other hand, include those of setting up the control and those of continued administration.[8] When determining net benefit, the Government should consider the possibility that the control will not completely limit monopoly pricing and the monopolist will "capture" the regulator to provide private over public benefits.[9] This potential will intensify with asymmetric information.

Partly for these reasons the Government has been reluctant to use these controls - indeed it has given attnetion to the removal of the last control over the Natural Gas industry. Instead, the Government has used "light-handed" regulatory tools to detect the use of monopoly power. By using these tools the Government avoids the direct cost of price control but must use the threat of control to ensure compliance. For this reason the Government should have a credible threat. Therefore this chapter will provide that credibility by examining how the Government could introduce a control, then the options it has on the type of control.

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5. Hillman J.J., and Braeutigam R., *Price Level Regulation for Diversified Public Utilities,* Kluwer Academic Publishers, Boston, 1989, pp 43-45.

6. Cave M., *Recent Developments in the Regulation of Former Nationalised Industries,* Treasury Working Paper No 59, London, August 1991, pp 39-40.

7. The Commerce Commission, *Price Control: A Guide for Staff,* Unpublished Internal Document, August 1991.

8. Ibid, p 12. The Commission comments that net benefits should be more than nominal, *'to allow for the substantial margin of error likely to be included in the figures'.*

9. For discussion on Capture Theory see Stigler G., 'The Theory of Economic Regulation,' *Bell Journal of Economics and Managment Science,* vol 2, Spring 1971, pp 3-21.

6.3 Price Control Legislation

Part four of the Commerce Act concerns price controls. Section 53 allows their use when competition is lessened or limited and when the controls will benefit consumers or suppliers.

> **Section 53 Governor-General May Impose Price Control in Circumstances of Restricted Competition**
>
> **53(1) [Price Control]** The Governor-General may ... declare that the prices for goods or services specified in the order shall be controlled in accordance with this Act.
>
> **53(2) [By recommendation]** The Minister shall not make a recommendation under subsection (1) of this section unless the Minister is satisfied that-
>
> (a) Goods or services to which the recommendation relates are or will be supplied or acquired in a market in which competition is limited or is likely to be lessened; and
>
> (b) It is necessary or desirable for the prices of those goods or services to be controlled in accordance with this Act in the interests of users, or consumers, or, as the case may be, of suppliers.

When in use, a description of the goods or services should accompany a control along with a statement that outlines the application of that order. The term of the control cannot be open-ended. When detailing the control attention should be given to quantity and quality, regions of application, and the persons to whom it applies. The Minister of Commerce can also ask the Commerce Commission to report on the desirability of controlling price. Part five of the Act contains a review provision for the controls established under part four. Section 70 gives the Commission power to authorise maximum, actual, or minimum prices by considering the extent of competition; the desirability of protecting consumer or supplier interests; and promoting efficiency in controlled markets (section 73). Instead of control, the Commission can accept a price undertaking by a firm which would have the effect of removing an explicit price control. The Commission can even recommend removal to the Minister (section 54(3)).

These provisions give the Government wide powers to impose price control. However, the Act does not comment on the type of control to use. Due to this and the fact the Government has not used many control options, I will discuss the options available and how these options will promote static efficiencies.[10] These options are primarily framed to protect consumer interests. Supplier interests - although controllable with section 53 - are better dealt with as a predatory pricing claim under section 36 (see chapter five).

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10. See Donaldson H., 'Market Dominance - Issues and Options,' *State Owned Enterprises: Privatisation and Regulation - Issues and Options,* Institute of Policy Studies, Seminar, Session Two, 14 September 1988, p 44.

6.4 Regulating Rates of Return

The Government could control the monopolists' ability to profit by regulating their return on assets. In this section I will evaluate this option by first discussing the method, then determine whether that method can effectively regulate price to a competitive level.

Rate of Return Method

This technique attempts to adjust accounting profit from super-normal to a normal economic level by allowing a return based on an enterprise's assets. To specify this return the regulator must determine expenses and establish a level of profitability for the organisation. The regulator will easily estimate expenses because he/she should include all operating costs that relate to operating assets (although there may be some adjustment for non-cash expenses). Determining profit, on the other hand, will prove more difficult. In this regard profit:

> ... must be sufficient after paying for the cost of capital (through dividends and interest) to fund all expenditure on fixed and working capital necessary to maintain the fabric of the business and to make a contribution towards capital required for expansion.[11]

The regulator could estimate profit by calculating the return of another "proxy" company that faces a similar level of risk to the monopolist.[12] Alternatively, the regulator could determine profit by multiplying the organisation's weighted average cost of capital (WACC) against an asset base. This would determine an allowed return on assets.

WACC will include the return on equity and debt in their capital structure proportions. The regulator could estimate return by using average rates in the economy or be more specific and determine the actual rates facing that company.[13] Once established, the regulator should determine an asset base on which to calculate profit (or use the profit of the proxy company). This amount plus allowed costs will then determine the amount of funds required by the organisation to meet the required rate of return.[14] The regulator will then allocate this

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11. Cliff C.E., *Profitability Assessment in New Zealand Price and Trade Regulation,* University of Canterbury, Unpublished MCom Thesis, 1983, pp 97.

12. Cave, supra, note 6, p 20.

13. For methods to establish WACC see Thompson H.E., *Regulatory Finance: Financial Foundations of Rate of Return Regulation,* Kluwer Academic Publishers, Boston, 1991, pp 27-98. The author discusses the use of comparable earnings and discounted cash flow, at 27-42; the capital asset pricing model, at 43-56; and arbitrage pricing theory, at 57-68; and other models at 69-88. Then he compares these methods at 89-98. Thompson then discusses the application of these methods at 99-176.

14. See Scherer F.M., *Industrial Market Structure and Economic Performance,* second edition, Houghton Mifflin Company, Boston, 1980, pp 49. He comments that profits *'should be at levels just sufficient to reward investment, efficiency and innovation'.*

requirement over product to determine price. The allocation will normally be based on fully distributed costings (FDC).

Problems with its Application

In a perfect world rate regulation will maximise welfare because the control will prevent the monopolist from extracting monopoly profits. However, inefficiencies may still occur because the control can create incentives that differ from those found in a competitive market. I will discuss this possibility by examining the problems of inefficient pricing, information asymmetry, incentive alteration, and that of a dynamic environment.

a) Inefficient Pricing

When setting prices, regulators typically fully distribute the cost (FDC) of business across its operations. This action will cause price inefficiencies because while some costs directly relate to a single output, others do not (ie. joint or common costs). Allocating indirect costs between various services will cause price to alter from marginal cost. Such an alteration will minimise inefficiency if based on Ramsey criteria, but often this will not occur because the regulator must satisfy other goals (eg. equitable allocations).[15] For these reasons the Seventh Circuit Appeals Court, in *MCI Communications*, was critical of the FDC. The Court stated:

> ... FDC is a quite arbitrary allocation of costs among different classes of service. There are countless FDC methods, each allocating costs by different mathematical formula. ... FDC cannot purport to identify those costs which are caused by a product or a service, and this is fundamental to economic cost determination.[16]

Therefore FDC will generally create cross-subsidies which could occur in inter-product (eg. local v long-distance telephone charges) and intra-product markets (eg. between business and residential consumers in the same market). These subsidies, while in themselves distorting, could create further inefficiencies. These inefficiencies will occur because pricing signals will distort investment in all markets.

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15. Baumol W.J., Koehn M.F., and Willig R.D., 'How Arbitrary is "Arbitrary"? or, Toward the Deserved Demise of Full cost Allocation,' *Public Utilities Fortnightly*, vol 120(5), pp 16-21, 1987. The author's comment that equitable allocations can reduce allocative efficiency. Also see Braeutigam R.R., 'An Analysis of Fully Distributed Cost Pricing in Regulated Industries,' *The Bell Journal of Economics*, Vol 11, 1980.

16. *MCI Communications v AT&T*, 708 F.2d 1081, 1116 (7th Circuit).

Irrespective of these inefficiencies, an organisation could purposely cross-subsidise to avoid regulatory control. Avoidance would result if the monopolist "shifted" costs from competitive to monopoly markets. This shift would force the regulator to allow a higher price and therefore greater profit in the monopoly market. Price in the competitive market will remain the same.[17] However, surplus monopoly market profits could allow the monopolist to price below marginal cost in competitive markets.[18] The regulator could prevent movement if he/she held symmetric information. However, the regulator often holds less information than the firm, which leads to the control being extended into competitive markets.

b) Information Asymmetry

To design an "efficient" rate structure the regulator must have information to determine allowed profit and prices. Often this will not happen because the regulator will not have access to information of the quantity or quality available to the regulated body. In fact, that body has an incentive to mis-report costs and only disclose information that will be to their advantage.[19] Noll and Owen note that the Federal Commerce Commission (FCC) encountered this problem when it:

> ... could not determine AT&T's costs, nor could [they] settle on a sensible cost-based method for pricing. ... It [became] apparent that even with a fully informed regulatory policy and the best will possible, the FCC could not cope successfully within available administrative procedures with AT&T's control of the information necessary to regulate prices effectively.[20]

To reduce this gap regulators have required the disclosure of information or have used the principles of agency theory. However, while these moves increase the quantity of information, they do not guarantee its quality which, at the end of the day, will determine the ability of the regulator to eliminate monopoly profits. For example, when determining a future price a regulator places much reliance on accounting information. Such reliance could cause inefficiencies because the information relates to past and not future accounting periods. Similarly, a profit calculation based on a historical cost asset base will create problems. These arise because historic cost records expenditures at past and not current levels, therefore the "allowed" profit may not allow for sufficient reinvestment.

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17. Cave, supra, note 6, p 24. Hillman et al., supra, note 5, p 15. These authors comment that firm's can shift costs by transfer pricing or by arbitrary allocations.

18. Averch H., and Johnson L.L., 'Behaviour of the firm Under Regulatory Constraint,' *American Economic Review,* vol 52(6), pp 1053-69, 1962.

19. Hillman et al., supra, note 5, p 12.

20. Noll R.G., and Owen B.M., *United States v AT&T: An Interim Assessment,* Working Paper, Stanford University, Palo Alto, California, 1987, pp 10.

c) Incentive Problems

Besides allocative inefficiencies, rate regulation may cause productive inefficiencies. Averch and Johnson (AJ) suggest that if the allowed rate is greater than the cost of capital, this will create an incentive to invest in capital equipment because the asset base dictates the organisation's profit.[21] Conversely, they suggest that if the rate is less than the cost of capital, little incentive will exist to investment, while if the rate equals the cost of capital this will have an indeterminable effect.[22] If rate regulation causes investment levels to alter, this alteration will adversely affect the most efficient method of production.

When related to entry, AJ suggest that when a control covers an entire organisation, that control may cause "inefficient" competitive market entry to increase the rate base. While removing competitive market regulation will correct this, doing so may render "efficient" diversification unprofitable because the regulator will then allocate a greater proportion of common costs over competitive markets.[23]

Apart from altering input variables, the rate provides no incentive for an organisation to minimise cost. It may even cause them to mis-report costs because the allowed rate will automatically cover any costs. Therefore rate setting will not serve as a perfect substitute for the competitive process because it promotes a "cost-plus" mentality.[24]

Finally, the rate setting process will divert a firm's attention away from competitive rivalry toward the determination of a rate. This diversion will cost the firm, and may even reduce the importance it attaches to reducing cost and innovating product. Therefore it would seem rate regulation provides incentives to reduce productive and allocative efficiencies because *`regulated monopolies have little incentive to manage inputs efficiently or to adopt cost-reducing innovations'*.[25]

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21. For the initial article see Averch et al., supra, note 18. For validation claim see Courville L., 'Regulation and Efficiency in the Electric Utility Industry,' *Bell Journal of Economics and Management Science,* Vol 5(1), 1974, pp 53-74. For rebuttal see Joskow P., 'Inflation and Environmental concern: Structural Change in the Process of Public Utility Regulation,' *Journal of Law and Economics,* vol 17, 1974, pp 291-327; also Klevorick A.K., 'The "Optimal" Fair Rate of Return,' *Bell Journal of Economics and Managment Science,* vol 2(1), 1971, pp 122-53; and Perrakis S., 'On the Regulated Price-Setting Monopoly Firm with Random Demand Curve,' *American Economic Review,* vol 66(3), 1976, pp 410-16.

22. Averch et al., supra, note 18. Also Cave, supra, note 6, p 23.

23. Hillman et al., supra, note 5, pp 10-12.

24. See Crew M.A., and Kleindorfer P.R., *The Economics of Public Utility Regulation,* Macmillan, London, 1986. The authors comment that rate *'regulation provides few if any effective incentives for efficiency'*.

25. Einhorn M.A. ed., 'Introduction,' in *Price Caps and Incentive Regulation in Telecommunications,* Kluwer Academic Publishers, Boston, 1991, chapter one, pp 2-3.

d) The Dynamic Environment

Setting price, to achieve an allowed rate of return, will ensure the monopolist meets this return provided the environment remains constant.[26] However, if prices, either general or specific, change, the monopolist may not meet this target because these alterations will drive cost toward price.[27] While this "effective" reduction will give the monopolist an incentive to minimise cost, that incentive will reduce with frequent rate reviews. There will also be less incentive if the monopolist believes the regulator will capture today's efficiencies with a lower rate tomorrow.[28]

The regulator could solve the inflation problem by forecasting the expected rate to allow for it in the return. For general changes the regulator can reliably estimate a value because the calculation process provides some latitude for error. However, this latitude does not exist for specific changes, so there is more opportunity for profit to deviate from the allowed rate. Therefore the regulator could, rather than estimating these changes, allow specific cost changes to pass automatically to consumers as they occur. These clauses have the advantage of reducing the need for regulatory hearings, but have the disadvantage of providing less incentive for a firm to seek lower prices or for that firm to substitute to an input of less cost. In other words, these clauses do not promote dynamic nor static efficiencies.[29]

Finally, some commentators have suggested that rate regulation provides no incentive to invest in technology because all costs are passed on to consumers irrespective of occurrence.[30]

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26. Thompson, supra, note 13, pp 206. The author argues that the only thing that will remain constant is that the environment in which the regulator operates will change.

27. Cave, supra, note 6, p 23. Also Stelzer I.M., *A Few Modest Proposals for Regulatory Reform, With Reference to the British Experience,* Putnam, Hayes & Bartlett, Inc., New York. He comments that rate-of-return regulation worked well until prices began to change. For more detailed discussion see ibid, pp 192-197.

28. Hillman et al., supra, note 5, pp 37-8. Also Crew M.A. ed., 'Introduction to Regulatory Reform in Public Utilities,' in *Regulatory Reform and Public Utilities,* Lexington Books, Lexington Massachusetts, 1982, p 1.

29. See Crew M.A. ed., and Kleindorfer P.R., 'Productivity Incentives and RoR Regulation,' in *Regulating Utilities in an Era of Deregulation,* St. Martin's Press, New York, 1987, pp 11. The authors comment that most electric and gas utilities have tariffs that contain automatic fuel adjustment clauses. Also see Stewart J.F., 'Economic Efficiency and Automatic Fuel-Cost Adjustment Mechanisms: Theory and Empirical Evidence,' in Crew M.A. ed., *Regulatory Reform and Public Utilities,* Lexington Books, Lexington Massachusetts, 1982, pp 167-182 at 168, empirical tests at 171-178. Stewart conducts empirical work on the efficiency incentive of fuel adjustment clauses. He concludes that fuel adjustment clauses do create inefficiencies.

30. See Monson C.S., and Larson A.C., 'Pricing and Investment Incentives Under Price Ceiling Regulation,' in Einhorn M.A., ed., *Price Caps and Incentive Regulation in Telecommunications,* Kluwer Academic Publishers, Boston, 1991, chapter 12, pp 221-237. The authors state that *'for decades, public utilities have been regulated by a maximum allowed rate of return. This type of regulation has long been criticized as being outmoded for technologically dynamic industries like*

Application in New Zealand

While the Government could use other forms of price control under the Commerce Act, it has chosen rate regulation to control the natural gas industry's wholesale and retail prices. Under that Act the Commerce Commission sets prices and reviews their level in accordance with section 73. The Commission will review a rate when it believes it justified, or when the party under control applies.

When reviewing a control the Commission must first consider the extent to which competition is limited or likely to be limited. In this regard it cites industry structure; then establishes the relevant product market; the size of that market; and likely trends in that market. Then the Commission links the results of this analysis to the desirability of protecting consumer or supplier interests. Interest, in this context, refers to the extent that control realises efficiencies above and beyond the cost of control.[31] Then the Commission considers how the control promotes industry efficiency. In this regard the Commission has concluded that safeguarding producer and consumer interest will directly link to this goal. Therefore the Commission selects the type of control that will maximise efficiencies.[32]

When implementing rate-of-return controls, the Commission has used the Capital Asset Pricing Model (CAPM)/Accounting Rate of Return (ARR) methodology to help calculate WACC.[33] This method was selected over the discounted cash flow and comparable earnings methods because of its objectivity and ability to adjust for risk.[34] The High Court, in *Auckland Bulk Gas Users v Commerce Commission*, upheld this decision by the Commission. When reaching its finding the Court concluded that CAPM was the only sensible theory:

> Because it was particularly difficult in New Zealand to apply a comparable earnings method and to fix upon a comparable group of non-utilities which could provide significant and relevant figures, that

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telecommunications. For example, it has been argued that rate of return regulation retards new product and service innovation and research and development', p 231.

31. The Commerce Commission, *Decision 207*, Price Authorisation, Wellington, July 1897, p 11. It writes that *'the need to safeguard users, consumers and suppliers is very closely related to whether competition is limited or likely to be lessened. If competition is workable or effective then the unimpeded operation of the market will safeguard customer's interests to a greater or lesser degree. In a market where effective competition is absent price control can be effective in safeguarding customers' interests'*.

32. Ibid, p 12.

33. Ibid, pp 16-17, for a discussion on why the Commission adopted the ARR/CAPM approach.

34. *Report of the Commerce Commission/Petroleum Corporation of NZ Ltd Working Party on Price Control*, 5 February 1987. For further reference see Thompson, supra, note 13, pp 99-176.

> method would not be applied. Nor was the discounted cash flow method acceptable for New Zealand conditions and the state of information presently available.[35]

However, using CAPM may create problems because estimates of the Risk-free Rate, Market Risk Premium, and a company's Beta are required. While the Commission should determine the first two variables relatively easily, problems could exist when estimating Beta because no companies within the gas industry have shares traded on the sharemarket. Besides estimation concerns, CAPM rests on assumptions that may limit the application of the theory. Therefore both of these concerns could make any cost of equity estimate erroneous?[36]

Once calculated, the Commission must, before it can calculate WACC, collect cost of debt estimates, determine the effective tax rate, and establish the firm's debt to equity ratio. Then the Commission has determined what assets to include in the rate base and the value it should attach to those assets. Generally, the Commission has approached this task by selecting only *`"used and useful" historic cost assets in the asset base'*.[37] Once the base has been determined, the Commission has then calculated profit which, when combined with allowed expenses, will establish the revenue requirement. Then the Commission has determined price by allocating this requirement over an industry's operations. Finally, when the Commission has set price it has tried to use efficient pricing structures. For example, the Commission used two-part tariffs in the gas industry because that industry had distinct variable and fixed components in its cost structure.[38]

Summary

In a perfect world regulators will find rate regulation a valuable tool to limit the ability of the natural monopolist to price above cost. However, this world does not exist. Instead, information asymmetry makes the task of determining efficient prices impossible. However, even if information was not a problem and there were no problems setting price, rate regulation changes the incentive structure facing a firm. These incentives will cause productive inefficiencies, which will lead to and compound allocative efficiencies that occur from similar incentives. Therefore rate regulation is unlikely to force optimal pricing.

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35. *Auckland Bulk Gas Users v Commerce Commission,* (1990) 1 NZLR at 450.

36. Bebbington K.J., *Price Control and the Commerce Act (1986): An Evaluation of the Capital Asset Pricing Model as an Appropriate Method to Determine the Allowed Rate of Return on Price Controlled Goods and Services,* University of Canterbury, Unpublished MCom paper, October 1989. She concludes that significant problems exist with CAPM's application.

37. The Commerce Commission, *Decision 252,* Price Authorisation, Wellington, September 1990, pp 25.

38. Commerce Commission, supra, note 31, p 12.

6.5 Price Capping

While rate regulation provides relief, some have criticised its effectiveness by concluding:

> ... this strategy was costly to administer, provided no consistent incentives to cost-efficiency and technological improvement, afforded many opportunities for strategic misrepresentation of reported costs, and may have encouraged both uneconomic expansion of the utility's rate base and cross-subsidisation of its competitive services.[39]

These faults have led others to search for alternative ways of controlling behaviour. In this regard they have pointed toward these ideals:

> ... rather than creating regulation based on the premise of an omniscient regulator being able to set optimal prices based on full knowledge of costs and demand, a more realistic regulatory goal is to design incentive mechanisms for the regulated firm that will lead it to maximize society's objectives (whether these are efficiency, distributive, or other objectives) while pursuing its self interest.[40]

Price caps have been promoted as such a mechanism. In this section I will evaluate them by discussing their method, then determine what benefits they have over rate regulation. Finally, I will discuss how effectively they control the monopolist's ability to monopolise price.

Price Cap Method

Price caps set a ceiling over goods and services that the regulated firm may price up to but not above.[41] This control will have greater effect if it caps not the price per se but the rate of increase in that price.[42] In this regard the cap should only cover those products where competitive rivalry will not limit the monopolist from extracting profit.

The British have used price caps to control pricing behaviour. The control allows the firm to freely adjust their prices provided the weighted average of those changes does not exceed the rate of inflation (RPI) less a factor representing productivity improvements (X). The firm, in turn, will calculate that average over a basket of products or, in some cases, the forecasted average revenue-per-unit of output.[43] The control will provide incentive for the firm to

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39. Einhorn, supra, note 25, pp 1.

40. Action J.P., and Vogelsang I., 'Introduction,' *Rand Journal of Economics,* vol 20 (3) Autumn 1989, p 369. Also see Baumol W.J., 'Productivity Incentive Clauses and Rate Adjustment for Inflation,' *Public Utilities Fortnightly,* 22 July 1982. Baumol discusses the advantages of introducing dynamic variables when controlling price.

41. Also see Hayes B., and Siegel D., 'Rate of Return Regulation with Price Flexability,' *Journal of Business,* vol 59(4), 1986, pp 537-553. These authors discuss the desirability of adding price caps to rate of return regulation.

42. Littlechild S.C., *Regulation of British Telecommunications' Profitability,* London: Department of Industry, 1983.

43. For comparison between these two methods see Bradley I., and Price C., 'The Economic Regulation of Private Industries by Price Contraints,' *The Journal of Industrial Economics,* vol 37(1), September 1988. In commenting on the relative

maximise the spread between revenue and marginal cost of goods included in the basket. The productivity factor will also provide an incentive for the firm to reduce cost because the level of allowed increase will never match the inflation rate.[44]

While RPI-X will provide adequate incentive in the short term, the regulator should review the variables making up the control (that is the basket, the adjustment factor and the basket weightings) over a longer period (usually four to five years). The review will have the objective of ensuring the organisation's financial stability and that excess profits are not being earned.[45] The regulator and regulatee will negotiate these terms with terms based on probable productivity improvements, demand patterns and cash flows. The agreement may also allow the firm to pass on certain costs to consumers. Pass-on should only occur if a regulated body has no control over a large proportion of costs.[46]

Advantages of Price Caps over Rate Regulation

The proponents of price cap regulation claim several advantages over the more traditional rate of return approach.[47] While both techniques aim to balance rewarding shareholders and protecting consumers, price caps look toward the future by setting productivity rates based on projections rather than historical data.[48] When setting variables, the parties to the regulatory process will negotiate the values of these projections.[49] This process will enable the review to meet the specific needs of an organisation.

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efficiency of the two methods the authors state: *'the incentives given by the tariff basket constaint ... are likely to result in a more efficient price structure than would occur under an average revenue constraint'.*

44. Hillman et al., supra, note 5, p 49. In this regard price caps sacrifice allocative efficiency for productive efficiency.

45. Action et al., supra, note 40, p 370. Also Cave, supra, note 6, p 24. He suggests that *'British regulatory pricing has rested on the two pillars of (short-term) price-caps and (medium-term) rate of return regulation'.*

46. In the UK British Telecom and the British Airport Authority cannot pass through costs while British Gas, Water and Electricity suppliers have cost pass on provisions written into their licences. Also Hillman et al., supra, note 5, pp 53-54.

47. Action et al., supra, note 40, pp 370. Also Beesley M.E., and Littlechild S.C., 'The Regulation of Privatized Monopolies in the United Kingdom,' *Rand Journal of Economics,* vol 20(3), pp 456, 460-62.

48. Cave, supra, note 6, p 24. The author comments that these rates are set with reference to rate of return, but return is calculated on projections rather than historical data.

49. See Egan B.L., and Taylor W.E., *The Economics of Ceiling Price Regulation,* Unpublished Manuscript, Bell Communications Research, Livingston, New Jersey, 1987. The authors suggest four methods for assessing the productivity adjustment factor. These are: (a) average industry productivity; (b) a historical assessment of improvement; (c) an adjustment factor based on historical profits; and (d) by negotiation.

By allowing the firm to determine price, the potential for the regulator to interfere with the firm's day to day operation will reduce. This reduction could enhance efficiency because it will limit the potential for regulatory imposed cross-subsides. Similarly, the firm will have more freedom to respond to a competitor's actions, and will also have less incentive to shift costs from monopoly to competitive markets.[50] Therefore the cap will reduce the potential for inefficient entry and could even, in the long run, cause Ramsey "optimal" pricing. Ramsey pricing will occur provided the regulator removes surplus profits from prior periods and the basket weights are adjusted to eliminate cross-subsidy.

Besides preferable incentives, the regulator will not have the same need for information because he/she will no longer require allocated cost data to set price. In fact the cap may even provide an incentive for a firm to provide undistorted information because the regulator can, when negotiating, use past observations and obtain comparison from overseas.[51]

When related to profitability, the ability of the firm to keep all profits it earns will, unlike rate regulation, create an incentive for productive efficiency.[52] Therefore the firm will minimise operating costs and will even select the capital-labour mix that will minimise cost. Hillman and Braeutigam sum this phenomena by stating:

> Once the maximum price level constraint (or "ceiling") is set, the firm loses control over principal (but not necessary all) revenue enhancing efforts. Profit maximization becomes mainly a matter of cost minimisation. In this vital respect the goals of productive efficiency, profit maximization and social welfare can all be well served.[53]

The inclusion of inflation as an adjustment variable introduces a dynamic element into the price-setting process that will reduce the need for regulatory review.[54] Similarly, the productivity factor is dynamic because allowed price increases will never cover the rate of inflation. Therefore to maintain profits the firm must invest in cost minimising technology.

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50. Hillman et al., supra, note 5, p 36.

51. Cave., supra, note 6, p 27.

52. Hillman et al., supra, note 5, p 37.

53. Ibid, p 38.

54. Ibid, p 66.

Problems with its Application

Price caps solve many problems associated with rate regulation; however, other concerns may limit their effectiveness. I will consider these by looking at method problems, quality trade-offs, inefficient pricing and the similarity between price cap and rate regulation.

a) Method Problems

The success of price caps relies on the regulator being able to set a productivity factor that reflects the potential for industry cost reductions. However, the regulator may have difficulty performing this task, especially if industry technology changes rapidly, because the incumbent will have an incentive to provide information that reduces the factor.

The regulatory use of RPI could also create problems.[55] These could occur because RPI measures general price level changes in the economy, but any one organisation will only face a proportion of those changes. While that proportion may increase with a larger organisation, the weights assigned to those changes will still vary within the firm. Therefore the use of RPI will cause the firm's profitability to alter as the general changes vary from those faced by the firm. The regulator could solve this problem by allowing some specific costs to pass directly to customers. However, this strategy has the disadvantage of providing little incentive for the firm to substitute toward a relatively less expensive "substitutable" input. While the productivity factor will provide an incentive to substitute, it will create an imperfect substitute because setting the factor relies on estimates of the potential for future cost reductions:[56]

Both of these effects will stifle the realisation of productive efficiencies because they will effect investment to the extent that the regulator cannot determine X and to the degree RPI does not track actual cost changes.[57] The flexibility of price caps may also effect allocative efficiencies because it could allow the monopolist to exploit a dominant position.[58] While this could occur, the firm must be careful because exploitation could be met by entry; potential

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55. Ibid, pp 50-51.

56. For the difficulties associated with productivity assessment see Kiss F., 'Constant and Variable Productivity Adjustments for Price-Cap Regulation,' in Einhorn M.A., *Price Caps and Incentive Regulation in Telecommunications*, Kluwer Academic Publishers, Boston, 1991.

57. Hillman et al., Supra, note 5, pp 51-52.

58. Beesley et al., supra, note 47, pp 456.

liability under the Commerce Act; or by the regulator threatening to tighten the pricing constraint.[59]

b) The Quality of Service Trade-off

While price caps provide an incentive to minimise cost, a firm could do this by reducing the quality and coverage of service.[60] In this regard, the regulator may have to supplement the cap with quality regulation.[61] The British have addressed this problem by imposing disclosure requirements on their privatised industries; however, other measures have and can force compliance should they prove ineffective. Cave writes:

> ... that a price-cap regime combined with public and political pressure and other instruments need not lead to a lowering of quality measured by formal quantitative indices, especially when technical progress should improve quality.[62]

Other mechanisms to monitor quality have included placing a weighted measure of service quality in the adjustment mechanism or by introducing quality of service requirements into consumer contracts.[63] However, any of these approaches has faults because the regulators must select appropriate measures of quality and then trade that level against price.

c) Inefficient Pricing

Production efficiencies; removing fully distributed costing allocations; and moving toward demand elasticity pricing will make cap pricing more efficient than the rate regulation alternative.[64] However, there is still the potential for inefficiency. For example, inappropriate information could prevent the regulator adjusting weighting factors and removing profit so as

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59. Ibid, pp 462-3.

60. See Cabral L., and Riordan M., 'Incentives for Cost Reduction Under Price-Cap Regulation,' in Einhorn M.A. ed., *Price Caps and Incentive Regulation in Telecommunications,* Kluwer Academic Publishers, Boston, 1991, pp 155-166. The author's discuss how a price cap initially gives an incentive to reduce costs, but this incentive rapidly shifts toward the reduction of quality.

61. Thies C.F., and Manger P.R., 'Price Controls With Competition in Quality,' *The Northeast Journal of Business & Economics,* Vol 14(2), Spring/Summer, 1988. They comment that *'if price controls prevent prices from equilibrating ... then some other mechanism will'* allow equilibrium to be reached. Also Hillman et al., supra, note 5, p 39.

62. Cave, supra, note 6, p 34.

63. Noam E.M., 'The Quality of Regulation in Regulating Quality: A Proposal for an Integrated Incentive Approach to Telephone Service Performance,' in Einhorn M.A. ed., *Price Caps and Incentive Regulation in Telecommunications,* Kluwer Academic Publishers, Boston, 1991, pp 167-190. Also Cave, supra, note 6, p 34.

64. Hillman, supra, note 5, p 64.

to force Ramsey prices. Inefficiencies could also occur if competitive and monopoly markets are included within a single cap. Such inclusion will create an incentive for a firm to charge "captive" monopoly customers relatively more than if the cap only covered monopoly products. In this way the regulated firm will extract monopoly profits from monopoly customers, while predatory pricing in the competitive market.[65]

And because caps are set with reference to expected demand, any change in demand will cause prices to vary from costs. The British Director General of Telecommunications (DGT) explains:

> The RPI-3 rule is attractively simple. However, in telecommunications, the cost per unit of dealing with an increase in the volume of business tends to be much below the average cost for existing business. This means that a simple formula will tend to produce profits that are higher than expected and it tends to produce profits that are lower than expected in times of business recession.[66]

While the potential exists for inefficient pricing, much of this potential will depend on the level of power the regulator has to negotiate with a regulated firm. Often the Government will reduce this possibility by giving the regulator power to negotiate.

d) Similarity to Rate Regulation

Recently some have questioned whether there really is a difference between rate regulation and price capping. They raise this concern because when setting the initial price and adjustment factor, the regulator must consider the organisation's profitability. Of course to ensure normal profits, the regulator must repeat this process at each rate review.

The extent of difference will, at the end of the day, depend on whether the regulator has established rules to determine on how to establish X. For example, if the regulated company believes that the regulator will take current period cost savings away with a higher productivity factor, this will create less incentive to minimise costs now.[67] If, however, the regulator states that X will be based on future cost reductions, this will create an incentive for cost reduction.[68]

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65. Ibid, pp 40-41, 59-62. Also see Gist P., *The Role of Oftel,* London Business School, May 1988, p 22. Gist comments on the possibility of anti-competitive rebalancing if a control covers monopoly and competitive markets.

66. *Report of the Director General of Telecommunications,* Office of Telecommunications, London, 1985, p 9.

67. See Beesley M.E., Laidlaw B.H., and Gist P., 'Prices and competition on Voice Telephony in the UK,' *Telecommunications Policy,* September 1987, pp 230-236, at 230-32. The authors comment that if the productivity factor is set on profitability then the control may as well be a rate of return control.

68. Hillman, et al., supra, note 5, pp 42-43.

Besides promoting productive efficiency, one should also consider allocative efficiency when resetting the cap's variables.[69] Essentially, resetting involves a trade-off because if it occurs over a long period of time, prices are more likely to deviate from cost. If, however, adjustment occurs more frequently, there will be less incentive to minimise costs and invest in technology.[70]

Finally, the regulator's power to negotiate could be a factor in determining the effectiveness of a price capping regime. If the regulator possesses adequate information, he/she can set X to provide an incentive to minimise cost - something that may not occur with imperfect information. In this regard Beesley and Littlechild comment that:

> Whether the difference between RPI-X and rate-of-return regulation is significant depends on whether the regulator is able to use the additional bargaining power effectively. This depends upon the underlying scope for efficiency improvements and upon the extent and quality of the information available to him.[71]

Therefore it would seem that the differentiating feature between rate regulation and price caps is the potential for productivity improvements. If little potential exists, the incentive advantages of capping will reduce.[72] However, if they are possible, and the regulator has information to estimate their level, price cap regulation will provide better efficiency incentives than the rate approach.

Application in New Zealand

The New Zealand Government has used price cap regulation in its commercialisation and privatisation programme. The approach adopted, however, has not been as dynamic as the British in that productivity factors are not reviewed and the controls are not administered by any regulatory body. For example, New Zealand Post's deed of understanding with the Crown allows it to increase the price of the basic letter by the consumer price index (CPI) less a two percent productivity factor. Once Post has used this factor it reduces to a one percent level for

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69. Cave, supra, note 6, p 25.

70. Hillman, supra, note 5, pp 73-78.

71. Beesley et al., supra, note 47, pp 462.

72. Ibid, pp 471. The authors comment that *'the case for price control rather than rate-of-return regulation is strongest in telecoms, gas supply, and electricity supply, where technology is indeed changing. If the aim is to "hold the fort" until competition arrives, RPI - X will do this with greater potential productivity gains. At the other extreme, where there is less prospect of a shift in technology and only one firm in the industry, as with the electricity and gas transmission grids, there is less scope for bargaining about the potential for improvements in efficiency and no built-in mechanism to give the regulatory scope for bargaining via directly relevant comparisons. Here, the grounds for preferring RPI-X are least strong'.*

future increases.[73] Caps were used with the sale of Telecom to limit its ability to quickly eliminate cross-subsidies between toll and residential markets. The cap was included in the organisation's "Kiwi Share" obligations which prevented, unless profitability was "unreasonably" affected, increasing the Standard Residential Rental at a rate faster than the cost of living (CPI).

Summary

It would seem that price cap regulation provides an organisation with better incentives than the more traditional rate of return method. The Government will lose this incentive, however, if the regulator does not or cannot pay sufficient attention to the characteristics of the industry. This will occur because the regulator cannot control the appropriate variables.

6.6 Incentive Schemes

With heavier-handed forms of regulation such as price control regulators have a greater need for information to make efficient determinations. Often inefficiencies will result because firms will not have the incentive to supply this information for it will penalise their profitability. To provide incentive, researchers have proposed methods that "reveal information" so that the firm will, with little regulatory control, promote efficiency.

Some incentive schemes work on the basis of a Government subsidy.[74] Loeb-Magat devised a model that induced a firm to charge an optimal price and produce efficiently by paying that firm a subsidy represented by the area of consumer surplus. Sappington and Sibley (SS) developed this model with the recognition that a firm need not receive the entire surplus to choose first-best outcomes. Instead, they proposed that next period's subsidy will depend on the level of consumer surplus improvement in the current period. The regulator will determine this improvement by considering price, revenue and expenditure information. Finsinger and Vogelsang further advanced these previous models by devising a scheme that did not require demand information to calculate the level of the subsidy. Although this variation required less information than the previous models, the scheme took longer to reach optimal prices?[75]

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[73]. Ryan P., 'New Zealand Post Limited: Increase in Basic Letter Price,' *Treasury Report*, 22 March 1991.

[74]. For a more detailed discussion see Train K.E., *Optimal Regulation: The Economic Theory of Natural Monopoly*, The MIT Press, Cambridge Massachusetts, 1991, chapter 6.

[75]. See Loeb M., and Maget W.A., 'A Decentralised Method for Utility Regulation,' *Journal of Law and Economics*, vol 22, 1979, pp 399-404. Also see Sappington D.E.M., and Sibley D.S., 'Regulating Without Cost Information: the Incremental

More recently, Sibley has taken a different approach than the previous authors by requiring consumers, rather than the Government, to pay the costs of regulation. Under this model consumers will pay a proportionate access fee equal to the fixed costs within the organisation. By paying this fee, the scheme will optimise efficiency, provided the access fee does not deter entry, because the regulator will recoup profits earned in a previous period by imposing an optional tariff for the current period. This tariff will provide the firm, without revealing any information, an incentive to efficiently price.[76]

Despite obvious advantages, "incentive compatible" schemes may have considerable disadvantages. For example, models requiring the payment of subsidies could create distortions in other markets or force non-consumers to pay for efficiencies in a particular market. Despite the subsidy issue, other models rely on consumers selecting tariffs to maximise their utility. Often self selection will create problems because consumers will have insufficient information to select or cannot differentiate between alternative rate structures. For these reasons a Government may rely on traditional forms of price control.

6.7 Conclusion

The New Zealand Government has been reluctant to use price controls to control price because it sees these controls as a second-best technique to address a problem it could solve with first-best measures. Wilcox et al. supports this stance in highlighting the second best nature of control:

> Regulation ... cannot prescribe quality, force efficiency or require innovation ... Regulation cannot set prices below an industry's costs however excessive they may be. Competition does so, and the higher cost company is compelled to discover means whereby its costs can be reduced.[77]

However, because of the distorting effect of price controls, the Government has been reluctant to use them even when competition cannot exist. Instead, they have used the threat of regulation coupled with light-handed disclosure measures to protect consumers. If these

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Surplus Subsidy Scheme,' *International Economic Review*, vol 29(2), May 1988, pp 297-306. And see Finsinger J., and Vogelsang I., 'Performance Indices for Public Enterprises,' in Jones L.P. ed., *Public Enterprise in Less Developed Countries*, Cambridge University Press, 1982, pp 281-296.

76. Sibley D., 'Asymmetric Information, Incentives and Price-cap Regulation, *Rand Journal of Economics*, Vol 20, No 3, Autumn 1989, pp 392-404.

77. Wilcox C., and Shepherd W.B., *Public Policies Towards Business*, fifth edition, Irwin, Homewood, 1975.

controls prove ineffective, the Government should consider the use of price control to limit the possibility of exploitation.

To this end the Government could use rate of return regulation. However, this approach could create adverse incentives. For this reason it would be more likely to use a price cap over the monopoly product. Again incentive problems could result, but the effectiveness of this control will depend on the regulator's ability to negotiate with the party under control. If the regulator does not have this power, the Government should consider incentive styled controls.

Chapter Seven
Structural Solutions

7.1 Introduction

If regulation cannot control a monopolist's behaviour, structural separation could by increasing both competition within the market and contestability for the market. This increase will, in turn, reduce the need for, while increasing the effectiveness of, any remaining regulation.[1] Therefore a government should consider structural separation if it will promote efficiency more effectively and for less cost than regulation.

By separation I refer to divesting the natural monopoly portion of a business from those parts with competitive potential. Divestment could also refer to the separation of the monopoly to create competition in part of the industry where it previously did not exist. For these reasons I discuss separation as a regulatory option because structure, more than any other factor, determines the regulatory requirement.[2] Of course the Government should also consider the degree of market contestability, but if natural monopolies are largely capital intensive, and the nature of that capital is largely sunk, then it would seem likely that structure will play a key part. Therefore altering structure will develop competition more rapidly than if left to market forces.

For these reasons I will initially discuss the advantages of separation followed by a section looking at its disadvantages. From there I will determine how the Government should make the optimal structural decision. In making this decision I will consider other methods that will cause separation without having to resort to separate ownership. Then, before I conclude, I will discuss the mechanisms that will prevent separated organisations from reforming in the future.

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[1]. See Stelzer I.M., *A Few Modest Proposals for Regulatory Reform, With Reference to the British Experience*, Putnam, Hayes & Bartlett, Inc., New York, p 14.

[2]. See McGraw T., *Prophets of Regulation*, The Belknap Press of Harvard University Press, Cambridge, 1984, p 305.

7.2 The Advantages of Separation

The problem with a non-contestable natural monopoly is that it can extract profits from the monopoly market and markets relying on access to the monopoly. While regulation can address these issues, its application can also create problems. For example, industry may not see the threat of regulation as credible; the courts may not grant timely or appropriate relief; and the regulator may not have information to form an appropriate solution. In other words, any form of regulation cannot act as a perfect substitute for competitive rivalry.[3]

For this reason structural separation could provide an alternative remedy to the monopoly problem. That remedy would occur because separation will reduce the power of the monopolist to exploit. Veljanovski explains:

> The failure to break-up these large corporations, either in terms of services and/or regions, has meant that even if competition is permitted they dominate the industry and their size and scope of activities exceeds that justified by the appeal to natural monopoly arguments. It also reduces the effectiveness of regulation and diminishes the capital market and organisational pressures for greater efficiency and customer responsiveness.[4]

Reduced dominance will benefit the industry generally because smaller firms will show greater inclination to enter the industry. This will occur because the relative power bases of the entrant and the former dominant party will have moved closer together, which will lead to more negotiated agreements. More negotiation, in turn, will lessen the role of the courts and lessen the need for regulation. Besides market effects, reduced dominance will enable the Government to limit any restrictions that it might have otherwise placed on sale. Less restrictions, in turn, will allow the Government to maximise sales revenue.[5]

The increased number of firms and their increased use of the market will have another benefit in that it will provide more information on which to monitor industry. Hunt and Lynk recognised this potential when discussing the problems facing British Telecom's regulator (OFTEL). They said:

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[3]. Stelzer, supra, note 1, p 19. Here the author states that *'the British experience suggests that a vertically integrated monopoly is the most difficult of all beasts to regulate. In the case of most industries subject to regulation, these integrated companies can use the natural monopoly of their transmission grids - gas pipelines, electric transmission lines, the telephone network - to deter entry into other strata of the business'.*

[4]. Veljanovski C. ed., 'Privatisation: Monopoly Money or Competition?,' in *Privatisation and Competition: A Market Prospectus,* Institute of Economic Affairs, London, 1989, p 28.

[5]. See Jarden Morgan NZ Ltd., *Regulatory Issues Relating to Privatisation,* Report for Telecom Corporation of New Zealand Limited, August 1989, pp 84-85.

> Despite OFTEL's enthusiasm for increasing competitive pressures within the industry it has increasingly become involved in complex regulatory issues requiring cost and demand data which are often unavailable. This is one reason why it has been suggested that, should regulation fail to ensure productive and allocative efficiency within the industry, restructuring may be an alternative solution.[6]

Additional information enables the regulator to respond more appropriately to the use of market power. This ability, in turn, will probably see the dominant party conform to a regulatory threat because use will be detected more readily. Finally, the market system will give managers better incentive to perform because they will be less able to internalise "mistakes" within the firm. Jarden Morgan explain the value of these incentives:

> Markets promote "high powered" incentives for performance. The incentives are high powered because the income accruing to managers are directly influenced by their own efforts. Markets may be "less forgiving" than firms. In general, failure to perform in a market-based transaction is more likely to lead to termination of a relationship than where the relationship is organised within a firm. Consequently, strong incentives to perform exist in market arrangements.[7]

Besides these qualities, flatter management structures within a smaller firm will allow managers to control the organisation more efficiently and effectively than before.

The governments of various countries have, on occasion, used separation over regulation to promote competition. Perhaps the best known divestment occurred in the United States where a federal court separated the long-distance arm of the American Telephone and Telegraph Company (AT&T) from its local operations.[8] The structure of the local operations were in themselves altered to form seven regional companies. These companies, in turn, faced line-of-business restrictions, which prevented them from again using dominance in competitive markets. The British have also used structural alteration when privatising their electricity industry.[9] However, in general, governments have not been inclined to alter structure when privatising industry.[10]

Irrespective of use, separation provides a means of reducing regulation following the decision to privatise. Therefore I will first consider vertical then horizontal separation to determine their potential advantages over regulation.

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6. Hunt L., and Lynk E., 'Competition in UK Telecommunications: Restructure BT?,' *Fiscal Studies,* vol 12(3), August 1991, pp 73-87 at 83.

7. Jarden Morgan, supra, note 5, p 202.

8. *United States v American Telephone and Telegraph Company,* (1982) 552 F Supp 131 DDC.

9. See James Capel, *Reshaping the Electricity Supply Industry in England and Wales,* London, February 1990.

10. Veljanovski, supra, note 4, pp 27-28. The author suggests separation does not occur because governments wish to maximise sale revenue. Also Veljanovski C., 'Privatization's Bureaucracy,' *Institutional Investor,* November 1991, pp 17-18.

Vertical Separation

A vertically integrated natural monopolist can, if another party's existence depends on the monopoly, prevent access or provide access to the monopoly on discriminatory terms. While inefficiencies may not result from discriminatory terms, that potential exists when the quality, quantity or price of access favours the monopolist's own operations. Therefore the Government should prevent discrimination causing inefficiencies, because it distorts investment in competitive markets and gives the monopolist the potential to strengthen an existing dominant position.

Therefore if section 36 and the threat of additional regulation do not prevent discrimination, the Government should consider vertical separation to achieve the goal of non-discriminatory access. Separation will realise this goal because the monopolist will no longer have an incentive to favour his or her operation over that of another carrier. In other words, separation will make the monopolist a "common-carrier" of another's service. In their 1989 report to Telecom on privatisation Jarden Morgan commented on the American experience with separation:

> ... the basic rationale for the break up of AT&T was to facilitate the interconnection of long distance carriers with the local networks. AT&T's competitors argued that AT&T used its control over the price and quality of access to the local networks to prevent them competing in other markets, notably those for long distance services. The Justice Department's response ... was to require AT&T to divest the Bell Operating Companies and to restrict [these companies] to the provision of local exchange services only. This approach therefore aimed to reduce problems over access to the local networks ... by severing ownership ties between them and long distance companies, thereby removing any incentive for the local companies to give favourable access to related companies; ...[11]

While separation should restrict discrimination, that does not mean the monopolist will offer fair and reasonable terms to a supplier - that is a higher standard. A monopolist will have fair and reasonable terms when the price charged for access reflects the cost of providing a service and when that price is non-discriminatory. Non-discriminatory access, on the other hand, merely requires that the monopolist serve all suppliers on the same basis. Therefore the extent to which terms are fair and reasonable will depend on the power of the monopolist after separation. Generally separation will reduce that power; however, the height of barriers in monopoly markets will mean that it will probably still exist in those markets. Consequently, if

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[11]. Jarden Morgan, supra, note 5, p 84.

firms requiring access cannot match this power (ie. have countervailing power), the price of access will probably depart from cost.

If countervailing power does not exist, the level of dominance will depend on the structure in the monopoly market. While vertical separation will allow regulation to address this issue more readily,[12] the Government could consider further separation to achieve this end. Such separation will form the basis of the next section.

Horizontal Separation

Although vertical separation will increase the effectiveness of monopoly market regulation, the extent of that increase will depend on the information available to the regulator following separation. For this reason the Government should consider, after first considering the contestability of the monopoly market, horizontally separating the natural monopoly. Separation will provide the regulator with more information about the activities of the monopoly. It will also reduce the need for regulation by promoting competition.[13]

A government will normally horizontally separate the monopoly by using geographic boundaries. This separation could then allow these firms to compete for custom; however, the extent of competition will depend on the cost structure of the resulting monopolies. Obviously if average costs fall continuously over all output, less potential will exist for total replication so the monopolist will most likely target large consumers or enter at a territorial fringe. While true in a global setting, a greater potential for entry exists if the monopolist's costs fall over part of the output range.

Besides physical entry, the entrant could compete with the incumbent by using the incumbent's facilities on fair and reasonable terms. Separation, in turn, will increase the likelihood that the incumbent offers fair and reasonable terms because the market will have more information and separation will place the dominant parties on a more equal footing. But if the incumbent still offers discriminatory terms, the entrant should still have access to regulatory relief.

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[12]. For example, a more credible threat will exist with greater industry information. If the threat causes the Government to implement price control, greater control will exist over the monopolist because he/she cannot shift costs from monopoly to competitive markets. Stelzer, supra, note 1, p 19.

[13]. Veljanovski, supra, note 4, p 28.

Summary

Both vertical and horizontal separation have great potential to increase an industry's competitiveness and therefore efficiency. Jarden Morgan believe vertical separation to be more important. They write:

> Of these two objectives, the first is clearly the more important. The competitiveness of an industry (or, more precisely, the extent to which a particular industry structure is likely to give rise to efficiency concerns) depends primarily on entry conditions. The number of firms in the industry is a secondary matter and, indeed is largely irrelevant if there are no significant entry barriers to the industry.[14]

They view vertical separation as more important because they believe it is more likely to promote sustainable competition. To promote competition they believe the Government should remove entry barriers (vertical integration being one of them) to entice efficient entry![15] Horizontal separation, on the other hand, will have less significance because if barriers are removed efficient entry will occur. However, if barriers are not removed, the Government should consider horizontal separation, although it should consider the sustainability of this move.

To sum up, separation - either horizontal or vertical - could help promote competition and so limit the need for regulation. If this occurs, competitors will make less use of Section 36 to gain fair and reasonable access, while the Government's threat or use of regulation should become more general. In other words, the Government should adopt more of a "light-handed" regulatory stance.

7.3 The Disadvantages of Separation

From the above discussion one could surely question why successive governments have not, when privatising industry, more readily altered the structure of the dominant carrier. While revenue considerations could explain this in part,[16] other factors could impinge on the decision not to separate. For this reason I examine these factors.

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[14]. Jarden Morgan, supra, note 5, p 84.

[15]. Electricity Task Force Report, *Structure, Regulation and Ownership of the Electricity Industry,* Government Printer, Wellington, September 1989, p 47. They state that not separating could raise entry *'barriers ... into competitive parts of the industry, and price signals can be distorted. In turn, this tends to lead to monopolistic pricing, income redistribution, managerial slack, and the dissipation of rent to factors of production'.*

[16]. Veljanovski, supra, note 4, p 28.

When considering structure, one must consider the possible reasons for integration. Part of a pre-privatised structure will exist for political reasons. For example, British Rail resulted from the forced nationalisation of a number of railway companies. However, political pressures will not explain all structures - to do that one needs to consider other pressures. Many pressures could affect the structure of a private sector firm. For example, managers could acquire assets to build an empire; however, I will consider economic pressures because they best explain private sector structure.

A firm will face significant economic pressure to select the most efficient method of production. Generally, economies will accrue with scale because on a per output basis overhead and operating costs will diminish,[17] and scale could even see investment economies realised. But scale may not always produce economies because scale could lead to management having less organisational control. Less control, in turn, will lead to diminishing economies![18]

While diseconomies are possible, the potential for a lower cost structure, on the whole, will exist. In commenting on this possibility the Electricity Task Force writes:

> The difficulty with restructuring is that the industry may have combined competitive and uncompetitive activities in the first place because that was the most productively efficient way of organising the industry. There may be considerable efficiency gains from vertical and horizontal integration.[19]

Therefore vertical separation will not allow a firm to fully realise potential economies of scope (joint production). Horizontal separation, on the other hand, will prevent the realisation of scale economies. Consequently, production inefficiencies will cause an allocative loss.

Besides production efficiencies, integration can facilitate industry co-ordination. Proponents argue that sole ownership will better facilitate the physical co-ordination of production (eg. from one production stage to another), or the provision of a service from one

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[17]. Jarden Morgan, supra, note 5, p 100.

[18]. Ibid, p 204. The author's write *'vertical and horizontal integration enable relationships to flexibly adapt to changed circumstances but incur the costs associated with the reduced incentives to perform within an organisational structure. As the size of the organisation increases, organisational diseconomies can become increasingly important'.*

[19]. The Electricity Task Force, supra, note 15, pp 46-47. Also Jarden Morgan, supra, note 5, p 202. Finally, Demsetz H., 'Economics as a Guide to Antitrust Regulation,' *The Journal of Law and Economics,* vol 19(2), August 1976, pp 371-384, at 375. Demsetz comments on the diseconomies associated with separation: *'Proposals to deconcentrate industries whose structures ... have remained concentrated for long periods are likely to penalize consumers by constraining firms to uneconomical sizes and by removing incentives to grow through efficient performance, even if such deconcentration would increase collusion costs. Unfortunately, the vast literature relating market concentration and collusion has overshadowed the cost complications of restructuring industries and the message actually received by antitrusters takes little account of the cost increases likely to result from deconcentration'.*

activity to another (eg. in telecommunications connection from the local to toll network). Common ownership will also, they argue, enable an industry to quickly adopt a standard that will minimise the selection costs.[20]

While possible, the market system also has a history of achieving these ends. It could even achieve these ends more efficiently and effectively than common ownership. This is because the integrated firm's "central-planning" may not produce what consumers want, or produce these goods when consumers want to purchase them.[21] For this reason Evans and Heckman write, with reference to AT&T's arguments favouring integration, on the virtues of the market system. They explain:

> ... market systems in which ownership and authority are highly decentralized coordinate activities far more complex, interactive, and interdependent than the provision of telephone services. Common ownership and central planning create coordination problems themselves, which increase with the size of the enterprise. These problems are demonstrated in the extreme by the failure of socialist economies to prevent shortages and surpluses of goods and services, as well as by the failure to provide the quality and variety of consumer goods produced by decentralized economies of equal wealth.[22]

Therefore a market, like the integrated firm, can co-ordinate production. Co-ordination will occur by parties contracting with one another for the supply of input. Similarly, the pricing mechanism will allow consumers to standardise a product when they require interchangeability.[23]

While price will achieve such standards, some contend that common ownership will see that standard adopted sooner at far less cost. However, adopting a standard rapidly could have a down side because the firm may adopt an incorrect standard. This will occur because

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[20]. *US v AT&T,* (1982) 552 F Supp 131 DDC.

[21]. Evans D.S. ed., and Grossman S.J., 'Integration,' in *Breaking Up Bell: Essays on Industrial Organisation and Regulation,* North-Holland, New York, 1983, pp 112-115. Also see Hayek F.A., 'The Use of Knowledge in Society,' *American Economic Review,* September 1945, p 525. Hayek writes about the inefficiencies associated with central planning; he states *'even a single controlling mind, in possession of all the data for some small, self-contained economic system would not - every time some small adjustment in the allocation of resources had to be made - go explicitly through all the relations between ends and means which might possibly be affected'.*

[22]. Evans et al., ibid, pp 96-97. As an example of the co-ordination possibilities of a market they comment that *'you can purchase travel from Chicago to Washington by purchasing an airplane ticket from a travel agency; using your credit card; hiring a taxi to transport you to O'Hare Airport; and leasing a car to drive from National Airport to the centre of town. The travel agency, that taxi company, the taxi manufacturer, the airplane manufacturer, the credit card company, and rent-a-car company, and the car manufacturer probably have no common ownership between them. Your flight departs at a reasonably convenient time. Your taxi gets you to the airport on time. A bus takes you from the terminal to the rent-a-car company. Coordination is achieved, not by common ownership, but by each party realizing that it can make a profit by becoming more compatible with other parties'.*

[23]. Ibid, p 107. The authors write *'by balancing the benefits of variety against the benefits of standardization, the market system produces an optimal mix of standardized and nonstandardized commodities'.*

consumers have not had the opportunity to assess the merits of relative standards. Therefore society may bear a greater cost at the end of the day?[24]

For this reason, co-ordination arguments have little grounding because individual companies have a desire to maximise profit.[25] However, the cost associated with initial contracting and dispute resolution could explain vertical integration.[26] Jarden Morgan explain:

> Transaction cost considerations also arise with respect to the co-ordination and standardisation of the network. AT&T argued before its divestiture that without common ownership of all components of the telephone system the market would fail to co-ordinate the provision of local and long distance calling. It also argued that integration eliminated the need for time consuming and potentially expensive negotiations concerning specifications, quantities, prices and other aspects of contracting with outside companies, and that if separate and unrelated organisation were involved, propriety concerns would limit information exchange and make contractual arrangements more difficult and costly.[27]

The validity of these arguments will depend on the extent to which contracting does not occur between parts of an organisation.[28] For example, if a profit centre in a firm has the option to purchase goods from alternative suppliers or from within the firm, that centre must negotiate and contract to determine the supplier of product.

Besides co-ordination efficiencies, common ownership may allow principals, in an agency relationship, to monitor the agent more effectively and efficiently. This benefit will occur because principals do not monitor smaller organisations to the same extent as large organisations (although the increased amount of information available to principals could explain this). Similarly, when principals do monitor, they could monitor their respective agents less efficiently than if they were singly owned. For example, following separation the principals will have to replicate their monitoring activities over each individual firm. This "additional" monitoring, in turn, will create additional expense.[29]

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[24]. Ibid, p 96, 110.

[25]. Smith A., *Wealth of Nations,* Modern Library, New York, 1937, p 423. Smith writes *'[the entrepreneur] generally ... neither intends to promote the public interest, nor knows how much he is promoting it ... [B]y directing industry in such a manner as its produce may be of the greatest value, he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was not part of his intention. Nor is it always the worse for the society that it was no part of it. By pursuing his own interest he frequently promotes that of society more effectively than when he really intends to promote it'.*

[26]. See Posner R., *Economic Analysis of Law,* Little, Brown, Boston, 1972, p 42. He comments that contracting may allow a dominant party to haggle on the terms of the contract after it has been settled (ex-post opportunistic haggling) and as a result internalisation of the contracting process will remedy this. While certainly possible (subject to the extent of contracting within a firm) contractual law will limit the ability of the dominant party to successfully engage in such activity.

[27]. Jarden Morgan, supra, note 5, pp 98-99.

[28]. Evans et al., supra, note 21, p 119.

[29]. Jarden Morgan, supra, note 5, p 109.

Therefore transaction costs will have an important bearing on structure.[30] Their importance, however, will depend on whether a larger organisation can internalise costs ordinarily incurred by a market. Yet while recognising their importance, one should not lose sight of the possibility that the market could minimise many of these costs. For example, joint venturing will minimise many of these costs without having to resort to common ownership. Therefore cost minimisation will not explain structure in every case.[31]

Finally, while efficiency, co-ordination and transaction costs may explain integration, the cost of dividing an enterprise will be a real cost of separation. These costs, while largely transitionary, will relate to the company's physical reorganisation. Jarden Morgan explain:

> The major transitional cost would relate to the renegotiation of debt obligations, the disaggregation of the company's superannunation obligations, the renegotiation of employment contracts and the costs of relocating staff and equipment. Additional staff training costs may also be incurred. ... A significant additional transitional cost of the structural options relates to the impact on Telecom's investment decisions of the uncertainty they create. Investments which would be undertaken if the group remained under single ownership may not be appropriate if it is broken up.[32]

To assess the worth of separation, the Government should weigh its costs against likely benefits. I will consider this process in the next section.

7.4 The Optimal Separation Decision

When discussing optimal separation there are two issues the Government must address. First, whether integration would have occurred in a competitive market; then whether structural solutions provide greater net benefits than other regulatory options. I will discuss both of these factors in turn.

Optimal Integration

If Government policy seeks to use competitive forces to promote efficiency. It should try to adopt a "competitive" structure when privatising an organisation. From this objective we can assert that any firm will want to maximise profit. This assertion will allow us to consider those factors that determine structure.

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30. See Williamson O., *The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting,* The Free Press, 1985, p 103.

31. Evans et al., supra, note 21, p 112.

32. Jarden Morgan, supra, note 5, p 102.

In a competitive market a firm can only maximise profit by lowering costs because if it were to increase price, competitors would meet that rise by entering a market or by expanding output. To this end incumbent firms have an incentive to integrate (either vertically or horizontally) up to the point where its benefits exceed the costs of lost control. In other words, competition will ensure optimal integration. Geroski et al. explain:

> Vertical integration acts to a firm's advantage when it permits exploitation of technical economies from the combination of successive stages of production, when it enables internalisation of transaction costs which arise where contractual arrangements are difficult ... Internalisation of contractual arrangements may also yield disadvantages to the firm, however, as management becomes responsible for monitoring the efficiency of subsidiary activities which, in the absence of integration, might be more easily monitored in the market place. The decision to integrate will thus reflect a balancing of these costs and benefits, and, in many cases, the favoured outcome is partial integration through acquisition of a minority shareholding.[33]

Similar pressures will not be present in non-contested monopoly markets. Instead integration, while still containing a cost component, will occur so that the monopolist has increased ability to price above the competitive level.[34] If integration only occurs to increase monopoly power, that organisation will have a less efficient structure than if it were in a contestable market. For this reason the Government should direct its attention toward structural decisions relating to this area of power. Such a task will involve the Government evaluating different structures so it can determine the most optimal structure.[35]

However, the issue of producing a "competitive" structure may not be the issue because the Government could find it impossible to separate parts of the organisation relating to cost economies from parts relating to market power. Therefore when evaluating separation, the Government should compare the net benefits or losses of structural separation with the benefits or losses of a regulatory regime. Of course the extent to which separation will produce benefit depends on how long technology and demand patterns retain the monopoly characteristics of an industry. Nevertheless, the Government should always consider this potential when comparing structure to regulation. I now turn to this issue.

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[33]. Geroski P., Thompson D., Toker S., 'Vertical Separation and Price Discrimination: Cellular Phones in the UK,' *Fiscal Studies*, Vol 10(4), November 1989, pp 83-103, at 89.

[34]. Ibid, p 89. The authors also explain that integration may occur *'when it enables the integrated firm to gain or extend market power'*.

[35]. Jarden Morgan, supra, note 5, p 85, 127. This process will involve the Government evaluating a number of structures; however, in a country the size of New Zealand, the size of economies in our companies gives less potential for separation when compared to larger countries. For example, because of size, large overseas companies are more likely to be further down their average cost curve and face more demand than similar companies in New Zealand.

Optimal Regulatory Policy

When determining optimal regulatory policy, the Government should consider more than just optimal structure. It should compare and assess the costs and benefits of the existing regulatory regime against those of the structural solution.[36] Then it should, if the regulatory regime proves ineffective, also establish and then compare the costs and benefits of other regulatory regimes against the structural solution. While comparing different regulatory regimes, the Government should also consider other methods that cause separation. In other words, the Government must determine whether the formation of subsidiary companies or profit centres ("ring-fencing the organisation") will achieve the same or nearly the same ends as divestment.

Ring-fencing has an advantage over separation in that it will retain some of the economies associated with sole ownership, but achieve the goal of separation by partitioning management. However, the Government should weigh these advantages against the increased ability of the monopolist to exercise dominance. This ability exists because although a firm may undertake to negotiate all contracts on fair and reasonable terms, ownership will still provide an incentive to discriminate. Therefore ring-fencing will allow the dominant party to transfer pricing and cost shift. This problem will intensify if the monopolist must spread joint and common costs of production.[37] For these reasons the Electricity Task Force recognised the greater regulatory burden ring-fencing would create. It explains:

> ... ring fencing is a very demanding form of regulation as it requires considerable monitoring by a regulatory agency, and detailed accounting procedures. It attempts to replicate within the firm what would have happened in a separate company. Where there are substantial fixed costs, their allocation between different activities becomes important.[38]

However, the Task Force rightfully states that the Government should weigh these additional costs against the economic benefits retained by only partially separating the entity:

> ... a comparison of ring fencing and full separation needs to incorporate the combined effects of the transactions costs of dispute resolution, the potential costs of poorer industry coordination through market contracting, and the benefits of facilitating competitive entry.[39]

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[36]. Ibid, p 112.

[37]. This potential will be even more prevalent with a profit centre because there will be less separation of ownership.

[38]. The Electricity Task Force, supra, note 15, p 48. Quotation based on a report of Helm D., *The Ownership and Regulation of the Transmission Grid,* Oxford Economic Research Associates, March 1989.

[39]. Ibid, p 48

Despite weighing costs against benefits, the Government must consider, when determining which of the structural options to select, the increased difficulty of divesting an entity after privatisation. With this in mind the Government, when selling an entity, could threaten to divest parts of an operation should the owners not act in a "fair and reasonable" manner. This threat should, in turn, cause the firm to restructure internally. Such restructuring will see the directors forming subsidiary companies or profit centres. The directors should also instruct these bodies to negotiate contracts on an arm's length basis with all other parties.[40] In other words, the organisation retains its power, but on restricted terms.

Summary

When discussing the virtues of separation - either vertical or horizontal - the Government should carefully evaluate the net benefits of divestment. In this regard determining the type of structure that would exist in a competitive market will provide a useful first step; however, that structure may still give the incumbent significant power over the competitors and consumers it serves. To this end the Government may consider further separation to limit this power.

However, before separation occurs the Government should compare the net benefits of separation against those of existing and further regulation. This comparison will determine the optimal separation/regulation policy. However, when making this comparison, the Government should consider forms of separation that do not involve divestment. This consideration will determine the policy with the greatest net benefits, which, at the end of the day, will be the subject of a great deal of judgement.

7.5 Continued Separation

If the Government has decided to divest part of an organisation, it should then consider how to retain that separation. For this reason the government should consider the likelihood of the parts remaining separated; the desirability of allowing them to remerge; methods to prevent re-merging; and the possibility that the separated entities could develop these parts internally.

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[40]. Durbin S., *Officials' Report on Electricity Task Force Report,* Cabinet Policy Committee Report, Wellington, 25 August 1989. The benefits of using subsidiary companies and their potential problems were highlighted by the author when he commented about proposals for electricity reform in New Zealand. He said *'there is scope for grid charges and access conditions to be used as a barrier to the entry of independent generators. ECNZ has voluntarily acted to reduce this threat by placing transmission assets in a subsidiary company, Trans Power, and by requiring its generation and transmission subsidiaries to formally contract with each other for the dispatch of generation plant and the provision of grid services'.*

Re-merging or internal development (integration) will only occur on economic grounds if the monopolist can reduce cost, or if it will obtain or strengthened dominance. Cost led integration will benefit both industry and consumers for it will result in production efficiencies that will pass onto customers in the form of price reductions. In other words, integration will realise productive and allocative efficiencies.

If, on the other hand, re-integration occurs to obtain or gain market power, this may not benefit customers because although the move may realise cost reductions, it will also increase market dominance. The Government should, therefore, prevent mergers or development of this type if likely cost reductions do not exceed the increase in market power.[41] While correct in theory, the Government will have difficulty determining the weights of these two amounts. For this reason it may prohibit a company integrating once separated. I will discuss mechanisms that maintain separations in the next two sections.

Merger Law

The Government could prevent integration that leads to market dominance by relying on merger law. Such reliance would reduce the need for industry specific regulation because the law would have wide applicability to a variety of industries. However, as with any law its success will depend on its wording and enforcement.

In New Zealand part three of the Commerce Act relates to mergers and business acquisitions. Section 47 contains the main substantive clauses; it prevents a party acquiring or strengthening a dominant market position. Despite that section, section 48 excludes from application "bare-transfers" of market power. These transfers are excluded because they do nothing to affect the level of dominance in the economy. Section 47 reads:

Section 47 Certain Acquisitions Prohibited

47(1) [Dominant Position] No person shall acquire assets of a business or shares if, as a result of the acquisition,-

(a) That person or another person would be, or would be likely to be, in a dominant position in a market; or

(b) That person's or another person's dominant position in a market would be, or would be likely to be strengthened.

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[41]. Williamson O., 'Economies as an Antitrust Defense: The Welfare Tradeoffs,' *American Economic Review*, 1968.

To be liable a person must acquire assets or shares to place that person, or be likely to place that person, in a dominant position or strengthen an existing dominant position.[42] In this regard the courts must first establish that the acquirer has or will have control of the target, then define the relevant product market. Once these tasks are completed, the Court must determine whether a casual link exists between the merger proposal and the effect on dominance. In other words, the plaintiff must prove more than just resulting dominance, they must establish a link. Lockhart J discussed this issue in *TPC v Australian Iron and Steel:*

> It was not enough that the acquisition was the enabling circumstance of the acquired or strengthened dominance in the market. The acquisition must be either a sufficient cause of the existence of the state of dominance or substantial strengthening of the power of dominance in the relevant market, or one of a number of causes which together lead to or would be likely to lead to that state.[43]

Therefore a link will in part depend on whether control passes to a holding company; whether the merger aggregated market power;[44] and the extent of contestability in that market.

Besides section 47, merging parties may be subject to a lower threshold test than dominance. This will occur because the merger document will breach section 27 if the merger has the purpose, or has or is likely to have the effect, of substantially lessening competition in a market. If a breach of either section occurs the Commerce Commission can apply to the High Court for pecuniary penalties, injunctions, or, in the case of section 47, divestiture. Other parties can petition the Court for an injunction or damages if they have suffered damage following an acquisition. The Court also has leave to grant any order it thinks fit.

To avoid these consequences, a firm can apply to the Commission for it to clear or authorise the proposed merger (section 69). If the firm seeks a section 66 clearance, the Commission will only do so if the merger does not breach section 47. If the Commission denies clearance, a firm must apply, or apply directly if they believe the merger will breach section 47, for a section 67 authorisation.[45] To grant an authorisation the Commission must examine a proposal in greater detail than it would for a clearance. In determining whether to

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42. For a full discussion of New Zealand's merger law see Berry M.N., 'The Application of Competition Laws to Business Acquisitions in New Zealand,' in Farrar J.H. ed., *Institutional Investors And The New Takeover Regime,* Oxford University Press, forthcomming 1993.

43. *TPC v Australian Iron and Steel Pty Ltd,* (1990) ATPR 41-001, at pp 51,036-51,037

44 See *Re Rada Corporation - NZ Forest Products Ltd,* (1987) 1 NZBLC (Com) 104,183; Decision 202 of the Commerce Commission, 25 May 1987.

45. For a full discussion on authorisation proceedures under the Commerce Act see Ahdar R. ed., 'The Authorisation Process and the "Public Benefit" Test,' in *Competition Law and Policy in New Zealand,* The Law Book Company Limited, Sydney, 1991, pp 217-248.

grant an authorisation the Commission must not only determine whether dominance will or may result, it must determine the extent of detriment, then weigh these detriments against any resulting "public-benefits". The section 67(3)(b) authorisation test reads:

> If [the Commission] is satisfied that the acquisition will result, or will be likely to result, in such a benefit to the public that it should be permitted ... grant an authorisation for the acquisition;

Through this process merger law fulfils the requirement of allowing mergers to proceed if their gains outweigh the disadvantages brought about by acquisition. However, this test could have limited application. This limit occurs because when formulating benefit, the Commission must consider other factors besides economic efficiency (eg. the Commission has considered equity issues).[46] When considering detriment, however, the Commission has not only directed its attention to the acquisition or strengthening of dominance. It has, to its credit, also considered the effect that greater dominance will have on the economy and how that dominance could require greater regulatory control.[47]

When benefits do not out-weigh detriments, or a merger will result in the acquisition or strengthening of a dominant position, the Commission cannot grant the respective authorisation or clearance. If denial seems likely, the merging firms can gain authorisation or clearance by giving the Commission a written undertaking to divest part of the company (section 69A). This requirement places the onus of proposing an undertaking on the firm. This occurs because if undertakings are not given within a certain time period - 10 days for a clearance and 60 days for an authorisation - the Commission will decline the request.

Once a determination has been made, the firms involved in the agreement can either accept that ruling or challenge it in the High Court (section 92(c)). In determining the validity of any appeal, the Court may confirm, modify or reverse the determination in whole or part. It may even refer the case back to the Commission for reconsideration (sections 93 and 94 respectively).

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[46]. See *Re New Zealand Kiwifruit Exporters Association (Inc)*, (1989) 2 NZBLC (Com) 104,485 at 104,500; Decision 221 of the Commerce Commission, 15 September 1988, para 5.2. For a summation of factors the Commission have and will consider see van Roy Y., *Guidebook to New Zealand Competition Laws*, second edition, Commerce Clearing House, Auckland, 1991, pp 248-250.

[47]. For example, in *Re Petroleum Corporation of NZ Ltd*, Decision 233 of the Commerce Commission, 16 June 1989, para 145, the Commission writes *'in the administration of the merger and takeover provisions of the Act, if the Commission was required to choose between preserving a competitive environment or allowing the acquisition or strengthening of a dominant position together with an extension, or retention, of price control, then the Commission would choose to preserve the competitive environment'*.

Through this process merger law prevents the subsequent re-acquisition of dominance when there are no net efficiency gains. However, the law does nothing to prevent a firm from acquiring dominance through internal expansion, so the Government may require further legislation to prevent the accumulation of dominance. I will discuss such legislation in the next section.

Legislative Prohibition

Besides merger law the Government has two mechanisms by which it can prevent the accumulation of dominance by internal means. First, it can specifically legislate to prevent or limit divested entities from competing in markets where they previously had a presence. Secondly, it can divest entities should they become too dominant.

The United States Government has used both approaches. When separating AT&T, "line-of-business" restrictions were used to maintain the divested structure. These restrictions prevented the monopoly parts of the organisation (local service) from again having the incentive to discriminate between suppliers in the competitive sector (long distance).[48] However, these restrictions eliminated the possibility of a company realising economies in production through integration.[49] Therefore the per se prohibition was modified to allow entry provided it did not have anti-competitive effects.[50]

However, such prohibitions, whether full or partial, could prevent the natural monopoly realising future economies because separation may reduce the incentive to adopt cost-reducing technologies. For this reason Huber comments that AT&T's structural separation hindered the introduction of innovative services in monopoly markets. He writes:

> Structural separation ... discourage[s] the BOCs from designing innovative enhanced services that utilize the resources of the public switched network. Such innovation losses, resulting from the physical, technical, and organizational constraints imposed by the structural separation requirements, directly harm the public, which do not realize the benefits of new offerings.[51]

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[48]. See Anderson B., 'Market Dominance - Issues and Option, Comment,' *State Owned Enterprises: Privatisation and Regulation - Issues and Options,* Institute of Policy Studies, Seminar, Session Two, 14 September 1988, Regulation: Policy Issues and Options, pp 27-28.

[49]. Jarden Morgan, supra, note 5, pp 105-107.

[50]. See CCH, 'Proposal to Codify AT&T Consent Decree,' *CCH Trade Regulation Reports,* Chicago, 25 August 1992.

[51]. Huber P.W., *The Geodesic Network: 1987 Report on Competition in the Telephone Industry,* US Government Printing Office, 1987, p 6.17.

Therefore if separation harms productive and allocative efficiencies, the Government could use divestiture provisions to achieve a similar end. But using these provisions relies on a commitment to enforce, which even then could take many years to resolve. Therefore the Government may find it preferable to use acquisition restrictions because the efficiencies lost with prevention may be less than the harm associated with greater power. Nevertheless, the Government should allow integration if it does not result in a significant strengthening of dominance. It should review any line-of-business restrictions based on existing technology and the effect of acquisition on a dominant position.

Summary

Following separation, the Government must consider how to cement that structure in the future. To this end the Government could threaten to regulate should the need arise; rely on generalised merger laws; or draft legislation to preserve that structure. Of course the most light-handed option would be a threat, but because one can categorise the factors affecting integration, generalised merger law seems appropriate. Such law should ensure that acquisitions only occur if of net benefit; however, they will not prevent a firm from internal expansion. To this end line-of-business restrictions could augment merger law. These restrictions should allow integration if it results in net benefits.

7.6 Conclusion

Structural separation provides one means by which a Government can limit the scope of regulation. Regulation will decline because separation will increase the use of competition to promote efficiencies within those markets. However, while this potential exists, separation may reduce the economies realisable from a larger structure. This reduction will, in turn, reduce efficiencies.

Thus the Government should weigh the net benefits of separation against those associated with the existing structure. This comparison should compare net benefits from the current or likely regulatory framework so the Government can adopt an optimal policy.[52] When considering structural solutions, the Government should also consider maintenance of the separation in the future.

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[52]. Jarden Morgan, supra, note 5, p 114.

Section Three
Regulatory Application to Telecommunications

Liberalisation and commercialisation of the New Zealand economy occurred to increase its efficiency. However, these moves will not always create efficiencies because some industries have characteristics that made it more economic for one firm rather than many to produce required output. These industries are natural monopolies.

Barriers to entry and the captive nature of customers give these organisations market power.[1] This power enables them to increase price above the competitive level and limit the potential for competition in markets that rely on monopoly market access. In both cases the Government should consider using regulation to promote efficient solutions.

However, the Government should not concern itself with all inefficiencies because when detailing regulatory policy, it should first consider the extent of the inefficiency. For example, if a monopolist has little power to force price, or the power that it does have will not create a large loss to society, the Government may not intervene. The incentive toward less intervention intensifies because of cost, and the realisation that regulation will not perfectly replicate the competitive market. But if there are sufficient net efficiency gains, the Government should consider its use.

In this regard the choice of tool should reflect, where possible, the economic policy of the Government. Therefore in a liberalised environment, the Government should select "light-handed" regulatory solutions - that is rely on the parties with power to regulate their own behaviour. However, if these wishes are not followed, Government could implement "heavier-handed" solutions to force compliance. In other words, the incentive to comply comes from

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[1]. See Jarden Morgan, *Regulatory Issues Relating to Privatisation,* Report for Telecom Corporation of New Zealand, Wellington, August 1989, p 49. Concerning the telecommunications industry the report comments that the extent of regulation depends on the market constraints facing Telecom. These constraints include the above.

the threat of additional regulation. Obviously the differing nature of industries and the extent of compliance within those industries will cause regulatory solutions to differ?

This section will discuss regulation as it applies to New Zealand's telecommunications industry. I select this industry because the New Zealand Government has been the only government in the world to completely liberalise telecommunication services.[3] By complete liberalisation the Government has relied primarily on competitive potential to regulate participants in the first instance. However, there will be situations where that potential is not enough. This occurs because certain parts of the industry have characteristics normally associated with a natural monopoly.

Given there are efficiency concerns with natural monopoly, the Government has used "light-handed" regulation to promote efficiency in areas affected by market dominance. The Government has designed regulation to restrain Telecom's ability to monopoly price, other regulations have the objective of promoting competition. When promoting competition, the Government has passed the regulatory cost onto the parties seeking benefit. The control has the objective of resolving network interconnection disputes and prohibiting other forms of market foreclosure.

However, many have questioned the Government's use of "light-handed" regulation. They claim reliance gives the dominant party the ability to delay negotiating interconnecting agreements. They even argue the dominant party has an incentive to delay proceedings to the courts.[4] For these reasons they consider "light-handed" regulation inappropriate for the telecommunications industry in New Zealand. BellSouth's Managing Director explains:

> Government adopted the policy, which it still maintains, that the best form of regulation in telecommunications is competition. It was believed that monopoly minus regulation would equal competition. In fact, monopoly minus regulation equals regulation by monopoly. I would add that this Government policy was developed in good faith and was in accord with international trends at the time.

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2. Chetwin J., 'Market Dominance - Issues and Options; Comment,' *State Owned Enterprises: Privatisation and Regulation - Issues and Options,* Institute of Policy Studies, Seminar, Session Two, 14 September 1988, Regulation: Policy Issues and options, p 34.

3. Troughton P., 'Market Dominance - Issues and Options; Comment,' *State Owned Enterprises: Privatisation and Regulation - Issues and Options,* Institute of Policy Studies, Seminar, Session Two, 14 September 1988, Regulation: Policy Issues and options, p 45. Troughton comments that New Zealand has been *'the only country [in the world that had] gone for a completely deregulated fully competitive environment for telecommunications'.*

4. See Ratner P., 'International Private Sector Perspective,' *Competition Policy: David and Goliath?,* New Zealand Institute of Public Administration Seminar, Research Papers, Vol 9(1), February 1992, pp 27-30.

> It fails, however, to take into account some fundamental features and realities of telecommunications in New Zealand.[5]

They support these claims by citing the "heavy-handed" approach used by overseas countries to regulate telecommunications.

This section will discuss the regulatory stance adopted in New Zealand and suggest alterations should it prove ineffective. With this in mind I will divide discussion into five chapters. The first chapter provides background to the industry then outlines its development in New Zealand and how the goal of efficiency fits into this development.[6] The following chapters detail how regulatory policy can achieve this goal. First, chapter nine considers the issue of price and how an organisation with market power can exploit "end-of-line" consumers. It also considers how a monopolist can prevent or eliminate competition with its pricing policies. Secondly, chapter ten discusses the important issue of interconnection and how obtaining fair and reasonable connection will ensure competitive entry into telecommunication markets. Then chapter eleven considers other techniques the monopolist could use to impede competition in telecommunications markets. Finally, chapter twelve concludes this discussion by reviewing the previous chapters, summarising their recommendations, and making suggestions for the future. I should note that throughout these chapters I will refer to the possibility of structurally separating the monopoly from parts with competitive potential.

These chapters will consider regulation given the current economic environment in New Zealand. Therefore I will not question the Government's decision to commercialise and privatise Telecom, nor will I question its decision to completely liberalise the telecommunications industry. However, during each of these chapters I will also consider, where relevant, overseas regulatory experience and how the governments of these countries have regulated dominant telecommunications carriers. Yet in considering these countries, one must realise that they have not liberalised nor commercialised their telecommunication carriers to the same extent as New Zealand. For this reason I cannot directly compare - instead I can only draw conclusions from their experience.

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5. Davis K., 'New Boys on the Block,' *TUANZ 1992 Conference*, Auckland, 1992, p D-46. Also see the Commerce Commission, *Telecommunications Industry Inquiry Report*, Wellington, 23 June 1992. The Commission comment: *'the Commerce Act 1986 and Telecommunications (Disclosure) Regulations 1990 are unlikely to be fully effective in removing obstacles to competition in the industry'*, p 7 (emphasis retained).

6. Ministry of Commerce, *Telecommunications Information Leaflet No 1: New Zealand Regulatory Environment for Telecommunications*, 28 November 1991. They comment that the Government's goal of liberalising and privatising telecommunications was to create *'an efficient and fair market for [these] goods and services'* in New Zealand.

Chapter Eight
The Development of Telecommunications

8.1 Introduction

The telecommunications industry has perhaps one of the most rapidly changing technologies in the world. Its services are used by the majority of the population and are vital to many business decisions. Therefore the provision of service must be efficient so that decisions - within both the industry and community - are in themselves efficient.

To provide background for my industry discussion this chapter will briefly outline the telecommunications industry. From this consideration I will examine how the industry has developed in New Zealand. This will provide the background required to explain the reasons for commercialisation, privatisation and liberalisation in New Zealand; then I will consider how this process has also occurred in Britain, Australia and the United States. From this background I will discuss the effect of liberalisation by making specific reference to the development of competition in New Zealand.

8.2 The Telecommunications Industry

This section summarises what is meant by the telecommunications industry. It will do this by discussing the concept of a "network", then determine whether the whole network, or parts of it, possess the characteristics of a natural monopoly.

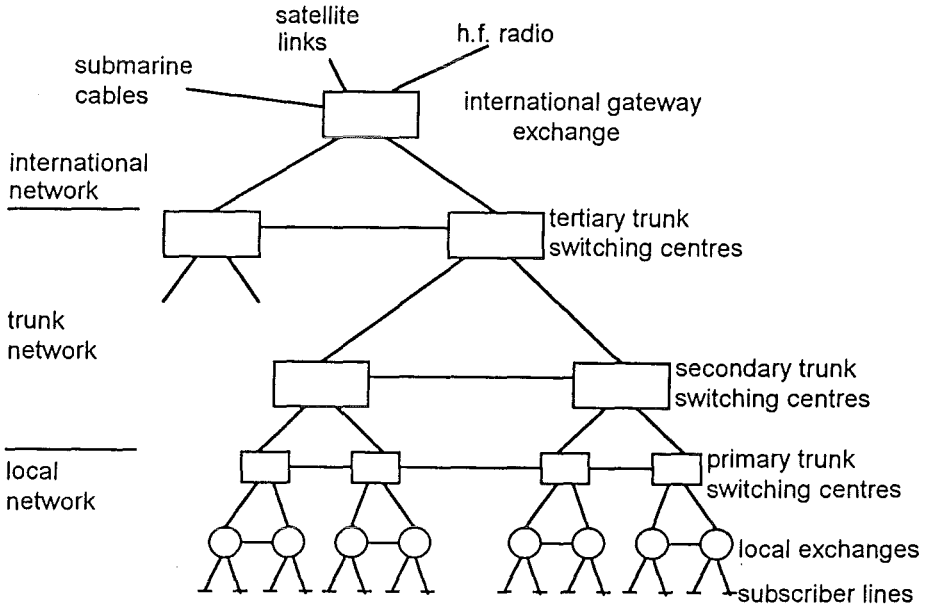
The Network

The term telecommunication refers to a variety of products, the most prolific being telephony. That product enables people (subscribers) to communicate with others over distance by using a transmitter that connects to a receiver (more formally called customer premise equipment [CPE]) by using electrical line or in some cases radio. If there are a large number of transmitting and receiving points it will be uneconomic for individual points to each have a

connection. Therefore switching exchanges reduce the number of lines between CPE by providing subscribers with a temporary connection when they make a call.

Of course having only one exchange may cause too long a line between the subscriber and the exchange. To rectify this the telephone company could use many exchanges. These exchanges could span a local calling area, for example Christchurch; a regional calling area, for example Canterbury; or a national calling area, for example New Zealand. Similarly, exchanges could span international bounds. The optimal exchange number will involve a trade-off between the cost of the exchange and the length of subscriber line. To allow unrestricted communication these exchanges will connect with one another so that calls originating in one exchange area can terminate in another. Such connection forms the basis of the telecommunications network.

The Telecommunications Network



(figure 8.1)

The "hard-wire" network is known as the *public switched telephone network (PSTN).* It consists of a hierarchy of networks, each with their own switching centres. These centres, in turn, allow a subscriber to reach any telephone in the world.[1] Calls not entering the trunk will be local calls, while calls passing through the trunk will be toll calls. Finally, calls that venture off-shore will use the international network.

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1. See Littlechild S.C., *Elements of Telecommunication Economics,* Institute of Electrical Engineers, London, 1979, pp 9-13.

Besides the network, telecommunication companies perform other tasks to facilitate communication. For example, subscribers must each have telephone numbers so calls can pass through switching equipment to the desired recipient. To make calls consumers must know the numbers of others - for this reason telephone companies publish directories and provide directory assistance. Finally, these companies must also maintain and expand the network.

A Natural Monopoly?

Due to the nature of this network, and because of the technology it includes, many have suggested that a natural monopoly exists within the industry.[2] This was certainly true in the past and led governments to nationalise or restrict entry to the telephone system to avoid inefficient investment. Both of these moves effectively eliminated competitive pressures that were growing in the industry.[3] However, increases in the level and decreases in the cost of technology have meant natural monopolies are not so common today. For example, technological improvements have seen the cost of connecting line fall and the use of less expensive micro-wave and satellite based communication. Similarly, advancing technology has also increased the capacity of these mediums.[4] Yet a similar cost decline has not resulted with switching equipment because while cost reductions have occurred, capacity increases have not been so great.[5]

As well as technological improvement, industry demand patterns have changed over time. More specifically cost reductions in the more elastic toll market, coupled with the gradual elimination of cross-subsidies between toll and local markets, have seen demand increase significantly. However, demand in the less elastic local loop has not seen the same increases, even with the reduction in subsidy.[6]

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2. For example, see Evans D.S. ed., and Heckman J.J., 'Natural Monopoly,' in *Breaking Up Bell: Essays on Industrial Organization and Regulation*, North-Holland, New York, 1983, pp 140-148. These authors discuss AT&T's case that the telephone industry is a natural monopoly. Also see Phillips A., 'The Impossibility of Competition in Telecommunications: Public Policy Gone Awry,' in Crew M.A. ed., *Regulatory Reform and Public Utilities*, Lexington Books, Lexington Massachusetts, 1982, pp 7-34, at 11-14, also at 17-31.

3. See Meyer J.R., Wilson R.W., Baughcum M.A., Burton E., and Caouette L., *The Economics of Competition in the Telecommunications Industry*, Oelgeschlager, Gunn & Hain. Publishers, Inc, Cambridge, Massachusetts, 1980, p 125, 317-327.

4. See Evans, et al., supra, note 4, pp 127-156. Also Wrobel M.G., *Telecommunications: The Demise of Natural Monopoly and its Implications for Regulation*, Library of Parliament Research Branch, Canada, April 1991.

5. See Hunt L., and Lynk E., 'Competition in UK Telecommunications: Restructure BT?,' *Fiscal Studies*, vol 12(3), August 1991, pp 73-81, at 80.

6. Wrobel, supra, note 4, pp 4-5.

Technology improvements and growing demand patterns have altered what has historically been a natural monopoly. These alterations make it unlikely that a natural monopoly exists in long-distance toll markets. The local residential and rural loops seem to contain the only remaining natural monopoly elements in the industry. These elements remain because technology and demand patterns do not make competition viable. However, the rapid increase in demand by business callers makes it unlikely that a natural monopoly exists in congested areas of this market.

Of course alteration in either of these factors could change this classification. Future technology promises to erode many of the costs associated with a "fixed-wire" link. For example, cellular or cordless "radio-based" telephones may render much cabling irrelevant. If radio based technology is not viable, cabling cost will fall if the telephone service is provided when installing another "utility" service.[7] Finally, the ability of alternative operators to resell a monopolist's capacity will also reduce the direct ability of the monopolist to exploit.

8.3 Historical Development in New Zealand

The telecommunications industry began in New Zealand with the commissioning of the Christchurch-Lyttelton telegraph service in 1862. In 1877 the first telephone service began between Christchurch and Blenheim which led to the commissioning of the first manual telephone exchange in Christchurch. Later, in that same year, the Government formed the New Zealand Post and Telegraph Department, which became the Post Office, to over-see the development of telecommunications in New Zealand.[8]

By 1930 all major centres had toll connection and consumers were able to make calls internationally. Technology continued to have a considerable impact on the industry. The arrival of automated telephone exchanges, and the increased ability to simultaneously carry separate calls on a pair of wires, greatly improved call quality, as well as the reliability and capacity of the network. The introduction of subscriber-toll-dialling (STD) in 1953 reduced the need for operators, while the continued expansion of the network allowed direct communication between Auckland and Wellington in 1959. During this time sub-marine cable was used for international conversation. Satellite, along with cable, have been used since 1971.

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7. See the Commerce Commission, *Telecommunications Industry Inquiry Report*, Wellington, 23 June 1992, p 36.

8. Telecom Corporation of New Zealand Limited, *Profile*, 1991.

Since departmentalisation, a statutory monopoly has existed for providing telephone service in New Zealand (although there were some exceptions).[9] This monopoly enabled the Government to use telecommunications as a mechanism to achieve economic development. It also used telecommunications as an instrument of social policy for it believed that "all" citizens should have access to the telephone (a "universal-service" argument). To achieve this, local connection and calling were subsidised from the profits of business connection and toll calling. These cross-subsidies had the effect of distorting consumption in all markets.[10]

Besides these problems, the sophistication of telecommunications technology was increasing at a time when it was growing in importance to the economy. For this reason, and because pricing policies gave consumers incorrect consumption signals, the Post Office came under increasing pressure to meet consumer requirements. The inability of Post to respond to these requirements was causing serious problems. Telecom explains:

> In Auckland the telephone network was already on the verge of collapse, yet there was no realistic plan to resolve the crisis. Throughout the country, the service was overloaded, inefficient and, in some areas, unmanageable.[11]

To address these fears the Government commercialised Telecom then sold it (after first liberalising the industry) to American interests. The motives for these actions are the subject of the next section.

8.4 Commercialisation; Liberalisation and Privatisation

As with many other western countries - for example Britain, Australia, and France - telecommunications services developed in a nationalised structure that included postal services, although in New Zealand banking was also involved. The Government became aware that substantial inefficiency existed within this structure and that telecommunications in particular had problems retaining staff. Retention, in turn, had the effect of delaying the network's development. To this end the Government commissioned a report with the objective of ensuring:

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9. For example, other organisations with telecommunications networks included New Zealand Rail Limited, the Broadcasting Corporation, Electricorp and the Police. See Dordick H.S., 'Telecommunications Deregulation in New Zealand: Testing the Limits of Non-Regulation,' *Columbia Journal of World Business*, Spring 1989, pp 17-30 at 25-26.

10. Low prices in local markets caused over-consumption while high prices in toll markets cause under-consumption. Subsidisation was also the practice overseas; for authority see Worbel, supra, note 4, p 6. Also chapter three, pp 8-9***.

11. Telecom, supra, note 8.

> ... there [were] clear financial objectives for management and that investments in the provision of Post Office services earn a commercial rate of return; that Post Office management is responsible for the performance of the Post Office and accountable for achieving adequate results; and where the Post Office competes with the private sector it does so from a position of competitive neutrality, in that it is neither advantaged nor disadvantaged from operating as a State-owned trading operation.[12]

Realisation of these objectives would promote organisational efficiencies by allowing Post to charge commercially justified prices. Post would also have greater incentive to respond to consumer needs. These benefits would, in turn, force efficiencies in the economy as a whole.[13]

The report was critical of the Post Office's management structure because the authors believed it lacked accountability. They recommended:

> ... the Post Office [be] reorganised into three discrete businesses each with its own support functions and Chief Executive so that each business - telecommunications - postal & agency - banking [would be] a complete independent business unit.[14]

This stopped short of divesting those units by instead suggesting decentralised operation and the reorganisation of each group to make the combined operation more efficient. While these suggestions applied to all business groups, the authors were particularly critical of telecommunications. They emphasised this group because changing technologies had made current lines of authority obsolete which had created organisational inefficiencies.[15]

While reorganisation promised certain gains, commercialisation promised more. For this reason separation occurred. Separation gave each organisation greater flexibility and improved performance.[16] Commercialisation, on the other hand, would further these goals by clarifying business objectives; improving management accountability; providing more incentive to the firm to respond to change; allowing for a greater amount of delegation; and clarifying the relationship between the Government and the organisation. Thus commercialisation would promote efficiency, because a competitively neutral environment free from political

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12. Mason R.N., and Morris M.S., *Post Office Review,* 21 February 1986, p 58.

13. Fountain J., *Telecommunications Reform in New Zealand: A Business Sector Perspective,* Unpublished Paper, June 1987 p 17.

14. Mason et al., supra, note 12, p 14.

15. Ibid, p 20. Also see Touche Ross, *Competition in Telecommunications Networks,* Department of Trade and Industry, Wellington, 1988. In this regard Touche Ross comment *'Telecom is not achieving a level of efficiency comparable to the best practice of overseas telephone companies. Its management systems are outdated and grossly inadequate, making efficient management very difficult. Automation of clerical functions has lagged behind investment in the network. The utilization of engineering staff on necessary investment and maintenance is low by world standards'.*

16. Mason et al., supra, note 12, p 18.

interference will make investment - in both the public and private sector - more efficient.[17] For these reasons Telecom was commercialised on 1 April 1987.

Coupled with commercialisation was the issue of whether to liberalise telecommunication markets. Traditionally statute barred entry; however, with the rapid explosion of technology and demand, prohibition seemed less desirable.[18] For this reason Mason and Morris thought the "basic-services-network" should remain under Government control, but recommended the liberalisation of enhanced network services (VANS) and customer premise equipment (CPE). Consequently the Telecommunications Act of 1987 lifted entry restrictions over CPE and some wiring restrictions. At the same time the Act still prevented entry into other markets.

However, partial liberalisation did not fit well within the competitively neutral requirement of the SOE framework, nor did it meet the objective of completely liberalising markets when at all possible. For these reasons the Government commissioned Touche Ross to report on the impact of complete liberalisation. The report concluded:

> ... competition in facilities-based PSTN and leased line services is possible and sustainable. The losses of economies of scale and scope which would be likely to result from entry would be small. They would likely to be outweighed by dynamic gains arising from the greater pressure on Telecom to be efficient, to offer better service and to be more innovative.[19]

Based on these recommendations, the Government moved quickly to completely liberalise the Telecommunications Industry. It did this by passing the Telecommunications Amendment Act 1988, which liberalised markets from 1 April 1989.

The Government recognised that sustainable competition would only exist in parts of the network where the natural monopoly did not exist. However, the extent of competition would, in turn, depend on the ability of subscribers to access a competitor's service. The "efficiency" of entry would depend on the competitor's ability to gain connection on terms that were fair and reasonable. To ensure these ends the Government - unlike their overseas counterparts - did not consider an industry specific regulator appropriate. Instead it urged competitors to negotiate their own connection agreements, but relied on the provisions of the Commerce Act should that

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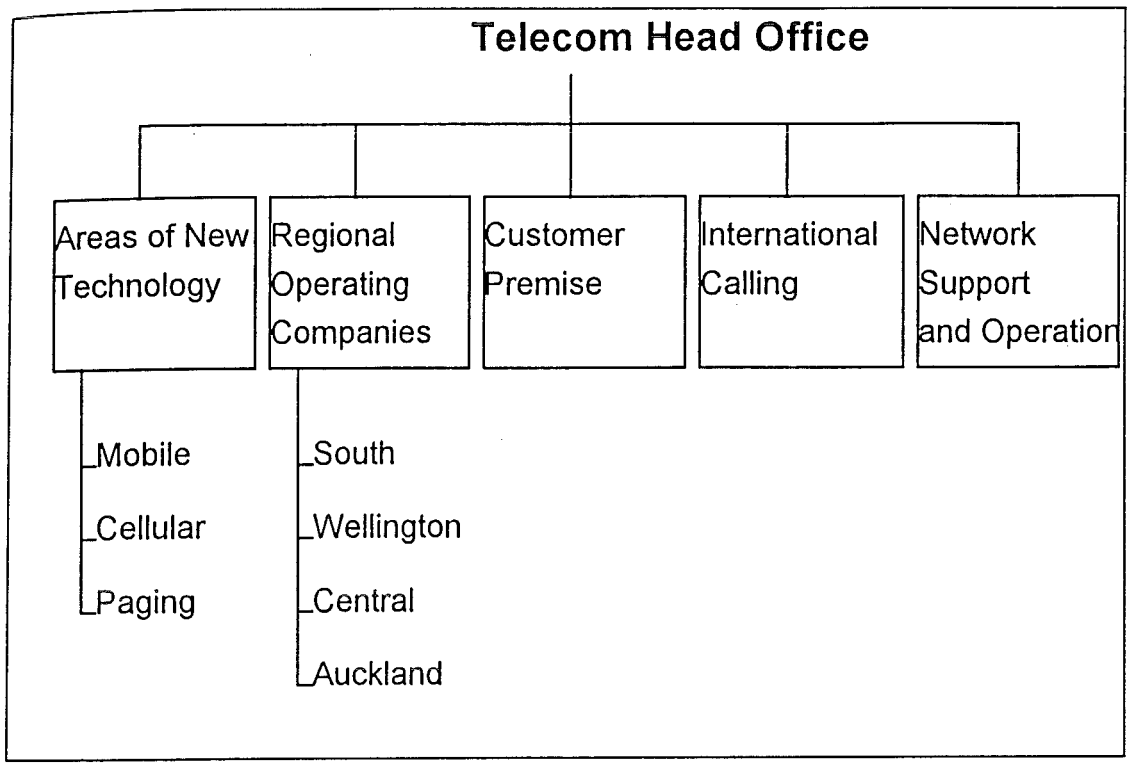
17. See Deane R., 'Reforming the Public Sector,' in Walker S. ed., *Rogernomics: Reshaping New Zealand's Economy*, GP Books, Wellington, 1989, pp 117-118.

18. Mason et al., supra, note 12, p 25. Also see Littlechild S.C., *Deregulation of Telecommunications in New Zealand*, Consultants Report, 11 January 1987. Beesley M.E., *Liberalisation of the use of British Telecommunications Network*, Report to the Secretary of State, Department of Industry, London, January 1981. Beesley details international work.

19. Touche, supra, note 15, at x.

process fail.[20] Telecom, for its part, detailed terms of interconnection and reorganised its structure to facilitate entry more readily.[21]

Telecom's Organisational Structure



(figure 8.2)

While liberalisation was of immediate concern, the Government considered privatising Telecom to maximise its incentives to perform (these incentives related to the minimisation of cost and optimal investment, both of which were of concern to Telecom at the time)[22] Unfortunately private ownership also increased the potential of Telecom to exploit consumers.

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20. See Ministry of Commerce, *Guarantee of Access to Essential Facilities,* A Discussion Paper, Competition Policy and Business Law Division, December 1989.

21. See letter from the Managing Director of Telecom (Dr P Troughton) to the Ministers' of Finance and State-Owned Enterprises. The first paragraph reads: *'I am writing to inform you of the Board's intention to restructure the Telecom Corporation and to make the necessary arrangements to enable competitors to enter the telecommunications market, once the monopoly held by the Corporation is removed'.* Later in the letter Troughton suggests the reorganisation will promote entry: *'Subsidiaries will not be permitted to discriminate unfairly between customers by giving any form of preferential treatment to other Telecom companies - they will deal with each other, and with competitors, on a totally arms-length basis'.*

22. See Veljanovski C. ed., 'Privatisation: Monopoly Money or Competition,' in *Privatisation & Competition; A Market Prospectus,* Institute of Economic Affairs, London, 1989. Also Anderson B., *Principles of Privatisation,* Treasury Report, Wellington, 28 May 1990. And Troughton P., 'Market Dominance - Issues and Options; Comment,' *State Owned Enterprises: Privatisation and Regulation - Issues and Options,* Institute of Policy Studies, Seminar, Session Two, 14 September 1988, Regulation: Policy Issues and Options, p 47. And Stevenson J.R.A., *Trends in Regulation Liberalisation*

For this reason the Government amended the Telecommunications Act to require Telecom to publish information to aid entry,[23] and more latterly, detailed a statement concerning its hopes for industry competition. Finally, the Government showed concern that Telecom could be sold overseas. The Government also believed a privatised Telecom would renege on an undertaking it made as an SOE, which prevented the removal of some cross-subsidies or the introduction of usage sensitive calling for residential or rural consumers. To ensure this did not happen, the sale agreement restricted ownership and guaranteed that:

> ... free local calling would remain available to all residential customers; and the standard residential rental for a phone line would not rise faster than the cost of living unless Telecom's regional operating company profits are unreasonably affected; and residential phone line rentals in rural areas would not be higher than in the cities; and residential service would remain as widely available as it is at present.[24]

The Company's Articles of Association contained these guarantees, which the Government enforced with remaining ownership in Telecom, the "Kiwi share". Apart from enforcement, the share also allows the Government to modify or renounce these rights at any time.

Commercialisation, liberalisation and privatisation has undoubtedly affected Telecom's efficiency. Between 1988 and the 1991 public share offering, the organisation spent $2.3 billion dollars upgrading the network with digital technology. During this time the percentage of digital switching equipment increased from 20 to 90 per cent, while optical fibre cable was laid over main trunks, through business districts and in other parts of main cities. Telecom continues to lay such cable at the rate of 1000 km per year, while the amount of digital switching equipment nears 100 per cent.[25] Further improvements have been made in administrative and technology support. Computerisation has occurred in *`network maintenance, directory publishing, and a customer management system that integrates accounting and billing information, installation requests, fault reporting and service records'*. Telecom has also introduced a variety of new products and services to augment existing service.[26]

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with Privatisation in New Zealand Regulatory Symposium 91, International Telecommunications Union Forum 91, Geneva, 9-11 October 1991.

23. Stevenson, ibid.

24. Telecom, supra, note 8.

25. Ibid.

26. Ibid.

Costs have also been cut since commercialisation, with the emphasis on staff reduction while maintaining and increasing service quality. Managers have been recruited for their ability to manage large organisations. Besides cost, Telecom has also reviewed its pricing policies and reduced many cross-subsidies. In conclusion:

> The radical restructuring programme, the massive investment in new technology, and a service philosophy totally focused on customer needs, has transformed Telecom into one of the most modern and efficient telecommunication companies in the world.[27]

Obviously a reduced cost structure has made the organisation more productive, while the removal of many cross-subsidies has increased allocative efficiencies.

8.5 International Liberalisation, Commercialisation and Privatisation

Overseas governments and regulatory bodies have initiated similar liberalisation programmes to that of New Zealand. Part of the objective of these programmes was to increase the efficiency of resource allocation. However, telecommunication markets were not liberalised to the same extent as New Zealand's. This section will discuss the content and process of reform in Britain, Australia, and the United States.[28] It will form the basis of discussion in subsequent chapters.

Britain

The first step in the British Government's restructuring programme was to structurally separate the Post Office into telecommunications and postal services. Separation, in turn, allowed the Government to privatise the newly formed British Telecom (BT).[29] The objective was to increase efficiency. Privatisation occurred in two stages with the first share offering of 51% in 1984, while the remainder was in 1991.[30]

Coupled with the separation of Telecom from Post was the issue of liberalisation. Unlike New Zealand's approach, the British Government did not fully liberalise telecommunications

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27. Ibid.

28. For an overview see Moschel W., 'Deregulation in Telecommunication Markets: Theoretical Concepts and Recent Developments in Several Countries,' *University of New South Wales Law Journal*, vol 9, 1986, pp 79-100. This author discusses the process of reform in these countries as well as others.

29. See Department of Trade and Industry, *The Future of Telecommunications in Britain*, HMSO, London, Cmnd 8610, 1982.

30. See Vickers J., and Yarrow G., *Privatisation: An Economic Analysis*, The MIT Press, Cambridge, Massachusetts, 1988, p 195. Also *The Economist*, 'Only Interconnect,' 1 June 1991, p 54.

markets. Instead, it adopted a regulated approach to transform the industry from a monopoly to competitive environment. This was embodied in the Telecommunications Act of 1981. This Act allowed some competition in equipment markets, the operation of networks and the provision of services (for example, line resale was allowed if it was to provide a VANS). The powers within this Act enabled the Secretary of State to licence Mercury Communications (MCL) to compete with BT.[31]

With the plan to privatise BT came the realisation that private ownership would not control the monopolist's (BT) ability to monopoly price. For this reason the Government commissioned Professor Littlechild to assess the regulatory options to control profitability. His report concluded that using price caps in local "monopoly" markets would limit the BT's ability to exploit. Not using them in non-monopoly markets, on the other hand, would provide the maximum incentive for entry.[32]

Besides price control, the Government created a new regulatory framework to accompany privatisation. The 1984 Telecommunications Act established the regulatory body OFTEL (Office of Telecommunications) and gave the Secretary of State for Trade the authority to appoint a Director General (DGT) to administer that body. The DGT, in turn, was to perform this task by adhering to the requirements of section 3 of the Act.

> The general duties of the Secretary of State and DGT are in Section 3 of the 1984 Telecommunications Act. Section 3(1) of the Act charges the Secretary of State and DGT first and foremost with a duty to secure the provision of telecom services throughout the UK and to ensure that those who provide them are able to finance those services. Subject to this they also have a number of other duties which are specified in Section 3(2). These are:- (a) to promote the interests of consumers, purchasers and other users in the UK in respect of the prices, quality and variety of services and apparatus; (b) to maintain and promote effective competition; (c) to promote efficiency and economy by producers; (d) to promote research and development; (e) to encourage major users from abroad to locate in the UK; (f) to promote the provision of international transit licences by producers in the UK; (g) to enable UK services providers to compete effectively outside the UK; (h) to enable UK apparatus producers to compete effectively outside the UK.[33]

To promote these objectives OFTEL has the ability, under section 12, to modify the licence agreements of carriers. Section 13 also allows the DGT to refer matters to the Monopolies and Mergers Commission for determination. For example, all carriers must negotiate terms of interconnect, but if they cannot reach agreement, OFTEL will intervene.

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31. Vickers et al., ibid, pp 204-205. Also, Telecommunications Act 1981. Also Beesley supra, note 18..

32. Littlechild S.C., *Regulation of British Telecommunications,* Department of Industry, London, 1983.

33. Gist P., *The Role of OFTEL,* London Business School, May 1988, pp 23-24.

Similarly, OFTEL has placed other terms within the licence to prevent BT cross-subsidising service; favouring itself over competitors; or otherwise acting anti-competitively.[34] As well as competitive issues, licence conditions also control BT's ability to exploit consumers. For example, the initial price control limited BT's ability to increase price on trunk calls, local calls and residential rentals. The ability to increase rental charges within this cap was also limited.

Within this framework, in 1990 the Government considered the possibility of fully liberalising telecommunication markets. This report proposed that from 1991 the Secretary of State would consider favourably any application for a network operating licence.[35]

Australia

The Australians have approached the issue of liberalisation in a similar manner to the British.[36] In 1975 the postal and telecommunications arms of the Post Office were separated to provide each organisation with better incentives for efficiency.[37] In 1988 the Government reviewed the regulatory framework that had grown around Australian Telecom, the Overseas Telecommunications Commission (OTC), and the telecommunications satellite AUSSAT.[38] This review concluded by separating the role of policy maker, regulator and service operator. Separation would enable operators to concentrate on providing service. This would then allow the Government to form policy and an independent body (AUSTEL) to regulate the industry.[39]

These reforms were embodied in the Telecommunications Act 1989 which enshrined the above operators as monopoly service providers. The Act did, however, allow competitors to establish private network operation; resell capacity for the provision of value added service; supply customer premise equipment; and install customer cabling.[40] Because of statutory

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34. Vickers, et al., supra, note 30, pp 209-10.

35. Department of Trade and Industry, *Competition and Choice: Telecommunications Policy for the 1990s: A Consultative Document*, HMSO, London, November 1990.

36. See Cave M., 'Regulating Competition in Telecommunications: British Experience and its Lessons,' *Economic Analysis and Policy*, vol 21(2), September 1991, p 141.

37. See Evans G. hon. sen., *Australian Telecommunications Services: A New Framework*, Ministry of Transport and Communications, Australian Government Publishing Service, Canberra, 25 May 1988, p 4.

38. Ibid.

39. Holmes J., 'The Telecommunications Act 1991 and its Meaning for Consumers and Competition,' in Corones S.G. ed., *Competition Policy in Telecommunications and Aviation*, The Federation Press, Sydney, 1992, p 217.

40. Ibid, pp 217-18.

monopoly, the Government used price controls to prevent the removal of cross-subsidies and control the ability of the three carriers to exploit consumers.[41]

In spite of reform, many commentators were critical about the degree of reform. For example, Pengilley writes:

> The Telecom monopoly on the most fundamental forms of traffic is to remain. ... [I]n a rapidly developing industry such as telecommunications, we cannot afford not to have a competitor, or at least the credible threat of a competitor, to Telecom.[42]

His concern was that adopting a regulatory solution to an area with competitive potential would cause the level of regulation to expand and force regulators to become preoccupied with the promotion of regulation rather than competition. For this reason he suggested that the Government should abolish the monopoly positions, then direct AUSTEL to promote competition by resolving the terms of interconnection.[43]

Perhaps in light of these types of concerns, and because of the growing international trend toward liberalisation, the Minister of Transport and Communications released a new telecommunications policy in November of 1990.[44] That policy was transformed into the Telecommunications Act of 1991, which provided for competition in all levels of service. At first the Government would only licence two participants to provide network services (one of these providers would result from the merging of Telecom with the OTC, the other from the privatisation of AUSSAT). Outside network operation no limits were placed on the potential for competition (eg. provision of VANS & CPE). Limits on the number of network operators would, however, end on the 30 June 1997.[45]

With this regime AUSTEL took a new role to not only protect consumer interests, but promote competition. The objectives of AUSTEL are embodied in sections 36-43 of the Telecommunications Act 1991. These can be summarised as follows:

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41. Evans, supra, note 37, pp 146-8.

42. Pengilley W., 'The Exclusion of Competitive Carriers,' in Armstrong M. ed., *Telecommunications Law: Australian Perspectives*, Media Arm Pty Ltd, Melbourne, 1990, p 293.

43. Ibid, p 293, p 303.

44. Beazley K. MP., *Micro-Economic Reform: Progress - Telecommunications*, Minister for Transport and Communications, Australian Government Publishing Service, Canberra, 8 November 1990.

45. Holmes, supra, note 39, p 218.

> ... (a) the promotion of competition; (b) the protection of consumers; (c) managing the numbering of telecommunications services; (d) reporting to the Minister on competitive safeguards and carrier performance; (e) licensing; (f) technical regulation; and (g) administration of the universal service levy arrangements.[46]

With specific reference to the Act, the more notable objectives of the legislation include:

> 3(a) ensuring that the standard telephone service:
>
> i) is supplied as efficiently and economically as practicable; and
>
> ii) is, in view of the social importance of the service, reasonably accessible to all people in Australia on an equitable basis, wherever they reside or carry on business; and
>
> iii) is supplied at performance standards that reasonably meet the social, industrial and commercial needs of the Australian community; ...
>
> 3(d) ensuring that the carriers achieve the highest possible levels of accountability and responsiveness to customer and community needs;
>
> 3(i) creating a regulatory environment for the supply of Telecommunications services which promotes competition and fair and efficient market conduct.[47]

Under the Telecommunications Act AUSTEL has wide powers to ensure these ends are met. Like OFTEL, it can use carrier licensing provisions to direct attention toward specific areas, resolve areas of dispute, and protect the interests of consumers. Upon amending a licence, AUSTEL then has power under the Act to enforce this amendment. It can even - subject to the applicability of the Trade Practices Act (a similar statute to New Zealand's Commerce Act) - refer matters to the Trade Practices Commission.

Finally, the Telecommunications Act places a "universal service" obligation on carriers (in other words, the Act promotes the cross-subsidisation of service). It also protects consumers by retaining the price control provisions of the previous Act. The Government, like most other countries, has used these controls to cross-subsidise service.[48]

The United States

The United States Government, unlike its British, Australian and New Zealand counterparts, has not faced the issue of privatisation. Instead, telecommunication companies

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46. Davey R., 'AUSTEL: The Australian Telecommunications Authority,' in Corones S.G. ed., *Competition Policy in Telecommunications and Aviation,* The Federation Press, Sydney, 1992, p 55.

47. *Telecommunications Act* 1991, section 3. Also Holmes, supra, note 39, pp 219-20.

48. Fanning V., 'Behind the Telecommunications Act 1991: Policy Imperatives for Telecommunications Reform,' in Corones S.G. ed., *Competition Policy in Telecommunications and Aviation,* The Federation Press, Sydney, 1992, pp 32-34. Holmes, supra, note 39, pp 219-21.

have almost always been held by the private sector. Initially, there were no regulatory controls over entry to telecommunication markets. This saw competition develop, which led the dominant carrier, the American Telephone and Telegraph Company (AT&T), to limit the ability of competitors to interconnect with its network. AT&T also limited competition by engaging in a programme of competitor acquisition.[49]

AT&T's anti-competitive behaviour led to regulatory control - at both Congress and State levels - provided AT&T's monopoly position was not threatened.[50] To administer these controls, Congress formed the Interstate Commerce Commission which had its powers transferred to the Federal Communications Commission (FCC) in 1934. As regulator the FCC was instrumental in maintaining AT&T's telecommunications monopoly for most of this century. However, various decisions of the FCC,[51] coupled with several legal decisions,[52] saw AT&T's monopoly position erode.[53] Besides limiting entry, the FCC and State Authorities have placed controls over AT&T's ability to exploit consumers. These controls have allowed the FCC to administer a subsidy from toll to local service.

Despite regulator inspired activity, the antitrust courts have also played a part in transforming the economy from monopoly to competition. For example, the Seventh Circuit Court of Appeals were asked by Microwave Communications (MCC) to rule on AT&T's refusal to grant it interconnection on fair and reasonable terms.[54] Similarly, antitrust courts

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49. See Bornholz R., and Evans D.S. ed., 'The Early History of Competition in the Telephone Industry,' in *Breaking Up Bell: Essays on Industrial Organiszation and Regulation,* North-Holland, New York, 1983, pp 7-40. For an overview of the American situtation see Whittaker W., *Regulated Competition American Style: Good or Bad For New Zealand?,* PTC Conference on "Opportunities for the Economy", Auckland, 16 October 1992.

50. See Evans D.S. ed., 'Introduction,' in *Breaking Up Bell: Essays on Industrial Organiszation and Regulation,* North-Holland, New York, 1983, pp 1-5, at 2.

51. For authorities see *Allocation of Microwave Frequencies Above 890 Megacycles,* (1959) 27 FCC 359, also *Microwave Communications Inc.,* (1969) 18 FCC 953, *Specialised Common Carrier Services,* First Report and Order, (1971) 29 FCC 2d 870, and *Second Report and Order,* (1972) 35 FCC 2d 844. Also see *Carterphone,* (1968) 13 FCC 2d 420, *aff'd on recon.,* (1968) 14 FCC 2d 571. See Brock W.Z., and Evans D.S. ed., 'Predation: A Critique of the Government's Case in *US v AT&T,*' in *Breaking Up Bell: Essays on Industrial Organiszation and Regulation,* North-Holland, New York, 1983, pp 41-60, at 42-43. Finally, Bolter W.G., McConnaughey J.W., and Kelsey F.J., *Telecommunications Policy for the 1990s and Beyond,* M.E. Sharpe Inc., New York, 1990, pp 84-92.

52. For example, see *Jordaphone Corporation v AT&T,* (1954) 18 FCC 644. In this case the court allowed non-electrical equipment to connect to customer premise equipment. Also see *Hush-A-Phone Corp v US,* (1956) 238 F 2d 266. Finally, *MCI Telecommunications Corporation v FCC,* (1977) 561 F 2d 365 DC Cir.

53. See Phillips A., 'Antitrust Principles and Regulatory Needs,' *The Antitrust Bulletin,* Fall 1990, pp 631-675, at 642-43.

54. *MCI Communications v American Telephone and Telegraph Company,* (1983) 708 F 2d 1081.

were the forum by which the Department of Justice (DOJ) sought the divestment of AT&T. The DOJ alleged that AT&T had engaged in a:

> ... continuing course of conduct involving: (a) cross-subsidization of "competitive" services by "monopoly" services; (b) pricing without regard to cost; (c) "familial biases" in procurement due to vertical integration; (d) foreclosure of independent telecommunications-equipment manufacturers; (e) uses of court and regulatory proceedings to delay or thwart attempted entry; (f) tracking and surveillance of competitors; (g) failure to make technical information available to the public in a timely manner; (h) coordinated timing or tariff changes and the introduction of new products or services to control "migration" in equipment use to AT&T's advantage; (i) using PCAs and "network harm" arguments for none save foreclosure purposes; and (j) discriminating in network access tariffs among the several carriers.[55]

The DOJ was successful in its quest for divestment.[56] This request led the trial court judge, Judge Greene, to separate AT&T's local and toll market operations and place restrictions on the ability of the local operators (RBOC) to compete in some markets.[57] The Federal Court would administer this order by requiring triennial reviews into perpetuity.[58] More latterly, concerted action by the RBOC's to enter "restricted" markets has placed pressure on the separation order (MFJ). This has led Congress to propose it legislate the terms of the MFJ:

> Eight years of relentless and pervasive political and public relations pressure by the Bell monopolies, however, has begun to take its toll on the integrity of the MFJ's competitive market structure. Judge Greene has now been compelled to an appellate panel - premised on a procedural quirk, but reflecting a fundamental disregard for the respective roles of the Justice Department and the courts under the

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55. *United States v American Telephone and Telegraph Company,* Civil Action No 74-1698 (USDC., DC., 1974). *Plaintiff's First Statement of Contentions and Proof,* p 625. Also see Phillips A., 'The Impossibility of Competition in Telecommunications: Public Policy Gone Awry,' in Crew M.A. ed., *Regulatory Reform and Public Utilities,* Lesington Books, Lexington Massachusetts, 1982, pp 7-34, at 9-11.

56. For a summary of Judge Greene's findings see Huntley J.A.K., and Pitt D.C., 'Judicial Policymaking: The Greeneing of US Telecommunicaitons,' *International Review of Law and Economics,* vol 10, 1990, pp 77-100, at 83-86.

57. *United States v American Telephone and Telegraph Company,* (1982) 552 F Supp 131 DDC, *aff'd mem. sub. nom. Maryland v United States,* (1983) 460 US 1001. These markets include toll, information services, research and development relating to customer premise or telecommunications equipment, and the manufacture of this equipment. See Sievers M., 'The Law and Economics of IntraLATA Competition: 1+Issues and Access Charge Imputation,' in Crew M.A., *Competition and the Regulation of Utilities,* Kluwer Academic Publishers, Boston, 1991, pp 7-32, at 8-20. This author discusses the regulation of RBOCs, more specifically LATA operators, following divestiture. Also ibid, pp 93-96. These authors discuss the pressures particular parties have placed on the MFJ.

58. Huntley et al., supra, note 56, p 83. The article comments on the role of the Federal Court in setting telecommunications policy. Phillips, supra, note 53, p 668. At the first review Phillips notes that the DOJ - the instigator of the initial separation order - recommended that the Supreme Court lift the line-of-business restrictions. The recommendation to lift the line-of-business restrictions came largely from Hurber's report. This report concluded that traditional monopoly parts of the telecommunications industry no longer had monopoly power. Hurber P.W., *The Geodesic Network: 1987 Report on Competition in the Telephone Industry,* US Government Printing Office, 1987.

antitrust laws and the Constitution - to cast aside the MFJ's restriction against Bell monopoly entry into the information services market.[59]

Summary

The approaches of Britain, Australia and the United States to liberalisation have differed from that of New Zealand. All of these countries have not liberalised telecommunication markets to the same extent as New Zealand, while they have used regulatory bodies to transform the industry from a monopoly to one with competitive potential. The use of regulators, in turn, has in some cases limited the use of antitrust law to resolve anti-competitive disputes. This is because regulators - especially in Britain and Australia - have licence and enforcement rights which supersede requirements found in generalised antitrust laws. American regulators, on the other hand, do not have these rights, so antitrust laws must still resolve disputes.

8.6 The Growth of Competition

The liberalisation of world telecommunications markets has led to significant competitive growth. This growth, contrary to the assertions of AT&T,[60] has benefited consumers - now they have greater choice, better quality at reduced prices.[61]

These benefits are no more evident than those obtained in New Zealand. For example, the lifting of restrictions on entry to CPE markets saw many firms enter those markets. Entry benefited consumers because of the increased range of product at a reduced comparative price. Penetration also occurred in the residential wiring market with Telecom actively encouraging its staff to become private contractors because of their lower overheads, while non-staff also entered that market. Entry has also occurred in the commercial wiring field, although to a much lesser extent than residential.[62]

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59. CCH, 'Proposal to Codify AT&T Consent Decree,' *CCH Trade Regulation Reports*, Chicago, 25 August 1992, p 9. For case authority see *United States v Western Electric Company*, (1991) 767 F Supp 308 DCC. Judge Greene, at 326, commented that the most probable consequence of allowing RBOC's into the market for information service would be *'the elimination of competition ... and the concentration of the sources of information of the American people in just a few dominant, collaborative conglomerates, with the local telephone monopolies at their base'.*

60. For a summary of AT&T's arguments see Brock W.A., and Evans D.S. ed., 'Creamskimming,' in *Breaking Up Bell: Essays on Industrial Organiszation and Regulation,* North-Holland, New York, 1983, pp 61-94. Also Evans D.S. ed., and Grossman S.J., 'Integration,' in *Breaking Up Bell: Essays on Industrial Organiszation and Regulation,* North-Holland, New York, 1983, pp 95-126. And Evans et al., supra, note 4.

61. For example, see Bolter et al., supra, note 51, pp 329-331. He discusses the impact of liberalisation on world markets.

62. Dordick, supra, note 9, pp 27-28.

Competition also developed in the market for network services. Despite delay, because of Telecom's inability to define interconnect standards and the costs of connection,[63] real competition exists in both the national and international toll arenas. Competition even has the potential to grow in local service markets. Clear Communications Limited, a joint venture company between Bell Canada, MCI Communications Corporation (USA), Television New Zealand, New Zealand Rail and the Todd Corporation, entered the toll market in 1991. Within 18 months of operation Clear has expanded its network and taken a much larger market share than envisaged when the market was first liberalised,[64] although some of this expansion and share relates to Clear avoiding the requirements of the Kiwi Share.

Competition has also emerged in areas of new technology. In a recent tender round BellSouth, along with Telecom Cellular, obtained radio frequency rights to begin a cellular telephone service.[65] Telecom also promotes competition in this market by allowing independent operators to sell cellular CPEs and negotiate cellular connection agreements to the Telecom network.

Competition, with or without actual entry, has been of considerable benefit to consumers. Where entry has occurred in network and CPE areas, or threatens to occur, the service or product price has fallen - both in nominal and real terms - to be more in-line with cost. Where no potential for competition exists, primarily in residential areas, consumers have also benefited because cost reductions, achieved by Telecom, have meant its cost of service has not increased in real terms since liberalisation. The quality of service, on the other hand, has increased markedly.

8.7 Conclusion

This chapter has discussed the concept of a telecommunications network and how the natural monopoly elements of that network are eroding. From that angle I discussed how

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63. Ibid, p 28.

64. Touche, supra, note 15, pp 53-59.

65. Although these rights were obtained it was not before a lengthy court case and appeal concerning allocation. Essentially the case concerned Telecom's allocation of two additional frequencies to complement an existing right. The lower court held that acquisition would increase Telecom's market dominance irrespective of whether one of the rights was not taken by Telecom. On appeal this decision was overturned on the grounds that Telecom took only one of its two allocated frequencies. See *Telecom Corporation of NZ Ltd v Commerce Commission & Ors*, 3 NZBLC, 1991, also CA 34/92, 1992. See chapter 11 section 11.9 for further case discussion.

telecommunications has developed in New Zealand. That discussion provided the background necessary to understand the rapid organisational and regulatory changes during the 1980s.

Like many overseas countries, these changes were designed to increase the efficiency of the government-owned telecommunications company. Commercialisation occurred to provide an efficient solution to a crisis that was developing within that organisation, while privatisation cemented and enhanced these gains. Liberalisation, on the other hand, reflected a realisation that natural monopoly characteristics were diminishing within the industry and that competitive pressures would best promote efficiency.

Nevertheless, natural monopoly characteristics have not totally diminished. Therefore the Government had to consider a regulatory environment, which would ensure that Telecom's dominance did not stifle the benefits of commercialisation and liberalisation. The environment should prevent Telecom exploiting consumers or competitors with its pricing policies. It must also guarantee competitors fair and reasonable interconnection with Telecom's local loop. Finally, it must prevent Telecom from engage in other forms of anti-competitive behaviour.

To achieve these ends the Government selected controls that differed substantially from those adopted in other jurisdictions. Specifically they selected light-handed forms of regulation over the more traditional heavy-handed regulatory body. For this reason I will discuss the issue of regulatory tools in the next three chapters. The final chapter will sum regulatory recommendations.

Chapter Nine
Industry Pricing

9.1 Introduction

When a natural monopoly exists in an industry, the owner of that monopoly may exploit captive consumers by pricing above marginal cost. The monopolist could also eliminate competition in other markets by pricing below cost with the intention of monopoly pricing in the future. This chapter will examine the need for regulation in the telecommunications industry to promote efficient pricing. First, I will discuss the potential for consumer exploitation then examine how New Zealand, and other countries have limited this potential. Then I will consider the issue of price predation and how antitrust law and other techniques can prevent the monopolist from using this anti-competitive tactic. During these discussions I will make reference to the regulatory practice in Britain, Australia and the United States. This will allow conclusions to be drawn concerning regulatory options.

9.2 The Need for Price Restraint

In a market closed to entry, a monopolist who faces captive consumer demand could extract profits from local telephone charges and from those parts of the network that depend on the monopoly market for access. Yet in an open market the monopolist could still extract profits from monopoly markets. The monopolist may even attempt profit extraction in non-monopoly markets. Extracting profits from these markets would initially see the monopolist pricing below cost so once competition is eliminated the monopolist can raise price above cost.[1] In other words, the monopolist seeks to drive competitors from a market by "cross subsidising" competitive service with monopoly profits.

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[1]. The natural monopoly features of the telecommunications industry occur within its network. This network can be conveniently separated into international toll; national toll; the local central business area and the local residential/rural area (see chapter 8). Based on current levels of technology and demand the natural monopoly probably only exists in the local residential and rural portion of the network.

Either of these practices cause allocative inefficiencies. These inefficiencies give consumers incorrect consumption signals, which lead to productive inefficiencies because producers receive incorrect demand information. To correct these faults the Government should consider regulatory mechanisms to force cost based pricing. However, determining the "cost" toward which price should tend creates difficulties because of the problems allocating joint and common costs between different market segments.[2] These problems are present in the telecommunications industry. For example, when distinguishing toll from local service, should toll costs include a portion relating to the costs of local infrastructure?[3] When separating cost, at what point does a local network become a toll network, or how should the firm allocate administrative costs between service? Obviously the allocation of cost will be an important factor in determining whether the firm has engaged in exploitative or predatory pricing. With these issues in mind this chapter will look at types of regulatory constraint. The first section will discuss exploitative pricing, while the second will focus on the monopolist's ability to predatory price.

9.3 Exploitative Pricing

Traditionally, public ownership of telecommuncations limited consumer exploitation. But privatisation made control an important issue because the monopolist could now exploit consumers in monopoly and non-monopoly markets. While liberalisation could restrict this ability where competitive entry was possible, it could not where entry was not possible. In these cases the monopolist's ability to exploit depended on the consumer's ability to substitute or forgo that product.

Unfortunately entry and substitutability are not features of the local telecommunications loop. To provide this loop involves tremendous investment in the purchase and laying of cable and the purchase and installation of switching equipment. These capital costs, in turn, effectively limit entry because they are irrecoverable should an entrant then decide to exit the

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[2]. Department of Trade and Industry, *Competition and Choice: Telecommunications Policy for the 1990s: A Consultative Document*, HMSO, London, November 1990, pp 66-68. Also Larson A.C., and Kovacic W.E., 'Predatory Pricing Safeguards in Telecommunications Regulation: Removing Impediments to Competition,' *Saint Louis University Law Journal*, vol 35(1), 1990, pp 14-17. Finally, Crew M.A. ed., and Crocker K.J., 'Diversification and Regulated Monopoly,' in *Competition and the Regulation of Utilities*, Kluwer Academic Publishers, Boston, 1991, pp 33-50.

[3]. Remember the toll network relies on access from the local network. For discussion see Kahn A., and Shew W.B., 'Current Issues in Telecommunications Regulation: Pricing,' *The Yale Journal of Regulation*, vol 4, 1987, pp 191-256, at 194-199, 208-210.

industry. Besides sunk capital costs, consumers appear captive to the monopolist because of their dependence on communications and their inability to substitute from that product. For these reasons the Government should consider using price constraints to promote local residential/rural loop efficiency. These moves should encourage efficient forms of production, cost based pricing (subject to market externalities), and the elimination of cross-subsidies.[4]

Although monopoly power issues are certainly a current problem, they may only be temporary because technological developments promise to erode many of the capital costs associated with residential supply. For example, the development of telephones not requiring cable or cables access to the house (whether cellular or cord-less telephones) will reduce costs. Where these technologies are not viable, the "piggy-backing" of telecommunications facilities with the supply of other services will reduce the cost of supply. Cost will fall because the trenching cost of providing that service will be sunk with that service. Therefore Cable Television could provide an alternative way for telecommunications to enter a house.[5] This potential also exists with the provision of gas and electricity.[6]

However, without controls the potential remains for exploitation based on current levels of demand and technology. Controlling that potential will be important if the Government seeks to realise allocative efficiencies. Control will also limit the monopolist's ability to engage in predatory conduct - it will even provide the incentive for efficient investment in all markets. The remainder of this section examines regulatory control in various countries.

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4. Wenders J.T., *The Economics of Telecommunications: Theory and Policy,* Ballinger Publishing Company, Cambridge Massachusetts, 1987, pp 63-67. Wenders discusses the desirability of marginal cost pricing, but also how prices should deviate from marginal cost if externalities exist in a market. In telecommunications markets he identifies a subscriber externality which refers to the value of the network as a whole being dependant on the total number of subscribers, therefore, price should be less than cost to encourage connection. The existence of this externality has been the subject of debate, so I shall not refer to it throughout the chapter. Also see Meyer J., Wilson R.W., Baughcum M.A., Burton E., and Caouette L., *The Economics of Competition in the Telecommunications Industry,* Oelgeschlager, Gunn & Hain, Publishers Inc, Cambridge, Massachusetts, 1980, Chapter Three, pp 75-81. Although I suggest efficiency, these authors suggest several other goals of regulatory pricing. These include: universal service; equity for different kinds of users and services; financial self-sufficiency; prevention of uneconomic entry; consistency with expected technological change; administrative simplicity; and historical continuity. Also Kahn et al., supra, note 3, pp 241-243.

5. See Carsberg B., 'Injecting Competition into Telecommunications,' in Veljanovski C., *Privatisation & Competition: A Market Prospectus,* Institute of Economic Affairs, London, 1989, p 90. Also Department of Trade and Industry, supra, note 2, pp 31-37, 49-50. And Jarden Morgan NZ Ltd, *Regulatory Issues Relating to Privatisation,* Report of Telecom Corporation of New Zealand, Wellington, August 1989, pp 66-67.

6. Commerce Commission, *Telecommunications Industry Inquiry Report,* Wellington, 23 June 1992, p 36.

9.4 The Approach to Restraint in New Zealand

Historically, rigid Government controls over the publicly owned telecommunications network restrained pricing policy. These restraints, as with most overseas telecommunications companies, facilitated public policy by subsidising residential connections and calling at the expense of toll calling and business connections. For example, there were no charges for local calling while charges for toll calling failed to follow the cost reductions associated with provision. The commercialisation of Telecom saw many of these restraints removed, while liberalisation of the industry introduced the threat of entry. This threat strengthened the resolve toward reduction and in some cases the elimination of cross-subsidies.[7]

While these moves were necessary to prevent "cream-skimming",[8] the Government became concerned about the effect of rapid rebalancing on the public.[9] They were also concerned that the "threat-of-entry" would not always force efficient pricing, particularly in local residential markets where there were large barriers to entry and where consumers were very dependant on service.[10] Due to this concern Telecom formed subsidiary companies to limit the ability to cross-subsidise service, and even gave an assurance to the Government about its pricing:

> Telecom has signalled its intention to reduce toll call prices and to abolish the three minute minimum charge later this year in preparation for deregulation. Telecom also has announced that it intends to continue with free local dialling for domestic subscribers. At the same time Telecom has indicated that it expects to be able to keep increases in rental fees for telephone services below the rate of inflation since previous price adjustments.[11]

These assurances represent a "light-handed" form of regulation because they attempt to limit Telecom's ability to exploit customers without resorting to explicit controls available under section 53 of the Commerce Act. However, to be effective, the threat of a more costly control

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7. See Touche Ross, *Competition in Telecommunication Networks,* Department of Trade and Industry, Wellington, 1987, pp 85-91. Also Crook J., *Privatisation - The Implications For Competition, Regulations and Profitability,* AIC Conference, Sydney, 24 and 25 July 1990, pp 7-8.

8. See Brock W.A., and Evans D.S. ed., 'Creamskimming,' in *Breaking Up Bell: Essays on Industrial Organisation and Regulation,* North-Holland, New York, 1983.

9. Crook, supra, note 7, p 7. He comments on the extent of Telecom's cross subsidy obligations.

10. Touche, supra, note 7, pp 53-59, pp 86-87. Also Commerce Commission, supra, note 6, pp 35-41. This report identifies that since liberalisation interconnection agreements have enabled competition to develop in most toll markets, but lack of agreement over access in centralised business districts has prevented its development there.

11. Prebble R. Hon., *Implementing Telecommunications Deregulation,* Minister for State-Owned Enterprises, June 16 1988.

must be evident for the primary control to be effective. For this reason the Government outlined its position:

> It is the Government's general policy not to introduce price control, nor has the Minister of Commerce announced the detailed circumstances in which control would be considered in relation to telecommunication prices. Commerce Commission inquiries and reports may, nevertheless, be initiated either at the request of the Minister of Commerce, or of its own motion, and, if necessary, control recommended.[12]

To police this threat the Government relied on consumer and media monitoring to provide an effective deterrent. Although these controls proved effective in the electricity industry,[13] the Government recently amended the Telecommunications Act to take a more active role in the monitoring process. The amendment required Telecom to publish information concerning its local operations and provide pricing details in dominant markets. The Ministry of Consumer Affairs explains:

> [The Telecommunications Act] should be amended to provide for regulation-making powers requiring information disclosure by Telecom, to facilitate the development of competitive markets in telecommunications and to help limit the scope for Telecom to take advantage of the remaining natural monopoly characteristics of local telephone networks. ... The disclosure requirements are intended to serve as a substitute for the disciplines of a competitive marketplace and to ensure that Telecom does not exploit its monopoly position.[14]

In spite of this information, and repeated assurances from Telecom over its pricing, the Government showed concern that a privatised Telecom would not follow these concessions. To this end the Government reinforced its position by imposing obligations on the new owners of Telecom by retaining ownership in the company. These obligations covered residential operations and required Telecom to guarantee free local calling to residential customers; ensure standard residential line rentals would not rise faster than the cost of living; and that these

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12. Ministry of Commerce, *Telecommunications Information Leaflet No 1: New Zealand Regulatory Environment for Telecommunications*, Wellington, 28 November 1991, p 3.

13. Report of the Commerce and Marketing Committee, *Inquiry into the Proposed Increases of Wholesale and Retail Electricity Prices*, New Zealand House of Representatives, Wellington, 1992. The report comments on the use of the regulatory provisions of the Commerce Act should price findings not be followed.

14. Ministry of Consumer Affairs, *Telecom: Disclosure of Information About the Quality of the Domestic Telephone Service*, Submission to the State Agencies Committee, Wellington, 8 May 1990, p 1. The Ministry of Commerce, *Telecom: Disclosure of Information About the Quality of the Domestic Telephone Service*, Submission to the State Agencies Committee, Wellington, 4 May 1990. These disclosures require Telecom's *'Regional Operating Companies to publish financial statements, and also pricing information on: line rentals; local call telephone charges; domestic long distance and international telephone call charges; leased circuits; and interconnection with other networks'*, pp 1-2.

rentals would be the same in the city and rural areas.[15] In other words, these requirements preserved cross-subsidies in a "heavy-handed" manner.

While these requirements controlled price, the Ministry of Consumer Affairs became concerned that the requirements would create an incentive for Telecom to reduce service quality to exploit consumers or rebalance cross subsidies more rapidly. Consequently the Ministry proposed the publication of quality statistics to detect reduction:

> Financial performance, tariff structures and service quality are closely linked. In monopoly markets, it is possible to improve financial performance and keep tariffs constant by lowering some aspects of service quality. In order to safeguard against such a development ... I propose that the disclosure regulations incorporate a requirement to publish information about the quality of domestic telephone service provided by each ROC.[16]

However, the Ministry of Commerce and Treasury opposed these moves because they had seen no need for them. The Government accepted these wishes not to amend the regulatory framework. Nevertheless, Telecom now voluntarily publishes these statistics.

With this framework Telecom has not eliminated the toll and local service cross-subsidy over the period it initially envisaged.[17] It has not been able to exploit consumers in local markets, but at the same time the requirements of the Kiwi Share have preserved many pricing inefficiencies. These inefficiencies, in turn, have affected industry investment levels; the ability of others to enter; and the settlement of interconnect agreements.

However, when rebalancing occurs, or if the Government revokes or refines the terms of its ownership stake, Telecom will be able to exploit the local residential market. For this reason the implementation of heavier-handed controls becomes more likely. Therefore I will consider the approach overseas countries have taken to restrain the monopoly carrier.

9.5 The Approaches to Restraint in Other Countries

Initially, the New Zealand Government's response to the possibility of price exploitation was "light-handed" in that it relied on Telecom to police its actions within stated guide-lines. Although this approach changed with the Kiwi Share, overseas countries have been more inclined to use "heavier-handed" regulation to limit a monopoly's power. I will now examine

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15. Telecom Corporation of New Zealand, *Profile*, 1991.

16. Ministry of Consumer Affairs, supra, note 14, p 2.

17. Crook, supra, note 7, pp 7-8.

the techniques selected by the governments of Britain, Australia and the United States. Whilst these techniques will relate to telecommunications, I will discuss the British approach to the liberalisation of electricity because the solution adopted provides an alternative way of achieving similar pricing goals.

Britain

a) Telecommunications

With the privatisation and liberalisation of telecommunications in Britain, the Government deemed it necessary to control British Telecom's (BT) ability to exploit consumers. It commissioned Professor Littlechild to investigate methods of control. His report evaluated the desirability of rate of return regulation (ROR), verse price caps (RPI-X) and no formal restraints. He concluded that price caps were the most desirable form of control because they were more likely to prevent exploitation, while its efficiency incentives were better than ROR. These views led him to conclude that no formal restraints were not as preferable to RPI-X, but more preferable to ROR.[18]

Littlechild then commented on the coverage of RPI-X. He believed that caps should only cover local operations because entry would prevent exploitation in other markets. Although correct, a combination of partial liberalisation and a "competitive" duopoly structure saw RPI-X styled controls covering both toll and local service.[19] BT and the Office of Telecommunications (OFTEL) were charged with the responsibility of negotiating the coverage and values of the variables within the control. If these parties could not reach agreement, OFTEL would force a determination on BT. If BT did not agree with OFTEL's finding they could appeal to the Monopolies and Mergers Commission (MMC).

The initial control was for five years. It prevented average price rises above the rate of inflation less a 3 per cent productivity factor, while rapid rebalancing within the cap was

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[18]. Littlechild S.C., *Regulation of British Telecommunications,* Department of Industry, London, 1983. The criteria used for evaluation were: protection against monopolistic exploitation of consumers; encouragement of efficiency and innovation; minimisation of the burden or regulation; promotion and maintenance of effective competition; and maximisation of net proceeds from the sale of BT plus the facilitation of its successful operation after flotation.

[19]. Beesley M.E., and Laidlaw B., *The Future of Telecommunications: An Assessment of the Role of Competition in UK Policy,* Institute of Economic Affairs, London, 1989, p 35. These authors comment on these constraints by saying that *'the constraints on Oftel's pursuit of effective competition are severe. Lacking licensing powers, the Director General cannot increase the number of network operators. He is, therefore, not able to challenge the duopoly policy'.*

prevented by a RPI+2% cap over domestic rental charges and connections. On reviewing the formula, Gist observed that:

> ... a real reduction in the regulated prices equivalent to at least 3% has been successfully achieved for each of the last four years. Within this the prices of different services in the regulated basket have moved in different directions. Over the period 1984-1986, for example, the price of peak rate local calls rose by 35% while the price of peak rate trunk calls fell by 32%. The principal adjustment on prices, or rebalancing, has thus been reductions in prices facing competition from Mercury but increases in prices where competition has not yet arisen.[20]

But concerns over BT's profitability saw successive rises in this factor from 3% to 4.5% in 1988, and then 6.25% in 1991. BT's ability to increase the price of "competitive-services" saw leased line traffic capped in 1988, while international tolls could well be included in the near future.[21] Despite the tightening and extension of these controls, concerns emerged over BT's quality of service. This allegation revolved around a belief that the cap's productivity factor provided an incentive to increase profit by reducing service quality. On the basis of this assertion, and a noticeable deterioration in quality, OFTEL forced BT to publish quality of service statistics to reduce the probability of trade-off.[22]

b) Electricity

The reorganisation of Wales and England's electricity industry may reveal important parallels for an alternative to price control in telecommunications. I draw this parallel because although the service of electricity supply differs from that of telecommunications, the network nature of its technology - fixed wire links between generating plant and consumers - has similar natural monopoly characteristics.

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[20]. Gist P., *The Role of Oftel,* London Business School, May 1988, p 43.

[21]. Beesley et al., supra, note 19, p 38. They comment that *'By extending the scope of price controls, the Government's original policy of distinguishing monopoly services, which had to be regulated, from the rest, to be free from inhibitions on making profit, has been implicitly denied'.* See Department of Trade and Industry, supra, note 2, p 60.

[22]. See Cave M., *Recent Developments in the Regulation of Former Nationalised Industries,* Treasury Working Paper, No 59, London, August 1991, p 34. Also see Vickers J., and Yarrow G., *Privatisation: An Economic Analysis,* MIT Press, Cambridge Massachusetts, 1988, p 227. And Holmes J., 'The Telecommunications Act 1991 and its Meaning for Consumers and Competition,' in Corones S.G. ed., *Competition Policy in Telecommunications and Aviation,* The Federation Press, Sydney, 1992, pp 217-232, at 223. Holmes comments that indicators of service quality would normally include: *'service provisioning time, fault incidence, fault restoration time, dimensions of operator assistance service, public payphone operability, network congestion, switching and transmission loss, complaint levels and adequacy of complaint resolution systems, and billing quality'.*

The basis of reform was to split generation, transmission, distribution and supply functions to encourage competition in generation and supply, but at the same time recognise the natural monopoly characteristics of transmission and distribution.[23] Competition in generation was facilitated by the formation of two holding companies that had generating assets allocated to them. Competition would also emerge from alternative suppliers constructing new generating capacity. In the supply market, the Government introduced competition more gradually because at first only large customers can request supply from distribution companies outside a geographic bound. However, this restriction will slowly ease so that all customers can request supply from alternative distribution companies.[24]

However, with transmission and distribution, direct facility based competition would be inefficient, so to substitute for competition the Government introduced regulatory controls to promote efficiency. To avoid facility duplication it formed 12 distribution companies, based on geographic territory, to administer local distribution networks. Similarly, the Government formed a single transmission company to transport power from generating to distribution companies. All of these companies hold exclusive licences for their business areas.

The essence of this reform is that although distribution lines have natural monopoly properties, and because they are the sole service supplier in an area, "common-carrier" rights enable other suppliers to offer service on another's lines. This removes the direct ability to exploit; however, an indirect ability exists because the franchise holders can over-price carriage. To prevent this the Office of Electricity Regulation (OFFER) controls the pricing of distribution and transmission.

So this type of reorganisation is relevant to telecommunications because distribution companies equate to the local portion of a telecommunications network. Separating these assets from transmission and generating reduces the ability of distribution companies to cross-subsidise. It also provides a better incentive for the connection between the National Grid and distribution companies. Finally, by allowing the 12 distribution companies to compete for supply, their ability to exploit consumers also falls.

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[23]. Generation refers to the production of electricity, while transmission refers to the transportation of that electricity from generators to distributors. Distribution refers to the connection from the supply companies to the consumer, while supply refers to the process of consumers receiving electricity.

[24]. James Capel, *Reshaping the Electricity Supply Industry in England and Wales*, James Capel & Co Ltd, London, February 1990. Also Hunt S., *Competition in the Electricity Market: the England and Wales Privatisation*, NERA, London, 1991.

When related to telecommunications, the separation of Telecom's Regional Operating Companies (ROCs) could see suppliers from one geographic area use "common-carrier" provisions to offer service in another ROC. Similarly, the separation of toll and local services will provide less incentive for the local operator to discriminate between alternative toll suppliers. While OFFER regulates carriage price, this need not occur because competitors could establish price in a similar way to interconnect agreements.

Australia

The Australian system of regulating prices strongly parallels the British, with price caps used to prevent exploitation. These controls followed the 1988 review of telecommunications, which recommended their placement over domestic and international networks. Natural monopoly characteristics justified this stance, but the desire to retain cross-subsidies was also a factor.[25] The control covered all regulated services, but separate caps were placed on business and residential consumers to prevent excessive rebalancing. The Minister of Transport and Communications would review the cap variables at three-yearly intervals after first consulting Telecom and AUSTEL. AUSTEL would also have the responsibility of commenting on the desirability of extending controls to other markets (primarily those for value added service and customer premise equipment).[26]

In 1990 the Government released a further opinion on telecommunications. This opinion recommended the merging of the dominant domestic and international carriers (AOTC), a move that would allow the liberalisation of network operation. However, these initiatives did not see the Government remove network related price controls. Instead it extended its coverage to include leased lines. Paralleling these controls were ones forcing the AOTC to retain flat rate charges for local residential calls. The Government did allow ATOC to introduce timed calls for business customers, although the rate was, in turn, subject to price control. To augment these caps AUSTEL developed quality of service indicators.[27]

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[25]. Heenan G., 'Regulation of the Australian Telecommunications Industry,' *Australian Economic Papers,* vol 8(4), December 1989, pp 68-69. To ensure no competition existed entry was legislated against.

[26]. Evans G. hon sen., *Australian Telecommunications Services: A New Framework,* Ministry of Transport and Communications, Australian Government Publishing Service, Canberra, 25 May 1988, pp 146-147.

[27]. Encel S., 'Telecommunications: A Public Monopoly or a Competitive System?,' *Economic Analysis and Policy,* vol 21(2), September 1991, pp 107-128, at 120. Also Holmes, supra, note 22, pp 223-24.

The need for control essentially reflects a dilemma of Government; on one hand it wants an efficient telecommunications organisation, while on the other it requires AOTC to cross-subsidise service. In other words, these requirements reflect the difficulties associated with:

> ... a government-owned public utility which is ultimately responsible to politicians while at the same time pursing commercial objectives. Commercial exigencies, such as the introduction of timed local calls, have political repercussions, and the final decision is usually made at Cabinet level.[28]

These controls do not so much protect the consumer from inefficient monopoly pricing, instead they promote equity at the public policy level. Therefore these policies create inefficiencies.

The United States

The approach of United States regulators to control has differed from that in other countries. Historically, regulators prevented entry because they thought this was the best way to protect the industry's natural monopoly. This action led to the Federal Communications Commission (FCC) and various state regulators using pricing surveillance techniques, and more latterly, rate of return regulation (ROR) to control price.[29]

However, efficient cost based pricing was not, it would appear, the issue; instead the goal of a "universal" telephone service was considered more important.[30] To ensure this goal the Federal Communications Commission (FCC) adopted a cost separation process to "value of service" (VOS) price. This process set price, not at cost, but at the level consumers would pay.[31] In other words, it sanctioned cross-subsidies that:

> When coupled with universal service objectives, at the state level the VOS approach has led to a number of rate perturbations; these include categorically higher telephone rates for business vis-a-vis residential customers. Similarly, city dwellers have faced higher rates as a group than rural subscribers, despite frequently higher service costs in outlying areas.[32]

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[28]. Encel, ibid, p 121.

[29]. Bolter W.G., McConnaughey J.W., and Kelsey F.J., *Telecommunication Policy for the 1990s and Beyond*, M.E. Sharpe Inc., New York, 1990, pp 123-124.

[30]. Ibid, pp 82-84. Essentially when achieving the goal of universal service the price of local connection/service is reduced below cost, while the price of toll service increases above cost; in other words cross subsidy exists. Wenders, supra, note 4, p 161. Wenders is more sceptical about the universal service argument by instead asserting that *'the features of the industry were such that political considerations were able to dominate competitive economic forces and effect a large and growing efficiency-distorting subsidy from toll to residence local service'*.

[31]. The basis behind cost Separation is that traffic and non-traffic portions of accounting costs are separated so that they can be allocated between local and toll networks. In this way the cross-subsidy is administered. Wenders, ibid, p 2.

[32]. Bolter et al., supra, note 29, p 83.

These perturbations were accentuated by relative cost reductions in the provision of toll as opposed to local calls.[33]

With the emergence of competition in previously closed markets, the FCC could no longer sanction many of these subsidies for fear they would entice inefficient entry. This fear led to debate over whether the FCC could achieve the goals of universal service and efficient entry concurrently. They "resolved" this issue by making toll market competitors pay an access charge to use the monopoly.

Despite toll market competition, and the vertical separation of toll and local markets, one might have expected the abolition of toll market price controls. However, divestment did not remove ROR controls. Instead, the FCC continued to administer ROR because it feared that AT&T's dominance in toll provision and its historical advantages with local companies could still allow it to monopolise price. AT&T's competitors do not face pricing restraints. More recently, the FCC have considered replacing ROR with price caps (PC) because:

> ... while [for the above reasons] there was substantial agreement that regulation was still required, the use of rate of return regulation came under increasingly sharp criticism as particularly ill-suited to the market environment in which AT&T found itself. The reasons for this view were the well-known limitations and defects of rate of return regulation, magnified in an environment of technological change, rapid growth of demand, the emergence of competition, and AT&T's presence in unregulated markets as well as interexchange service.[34]

For these reasons the FCC replaced ROR with PC to provide AT&T with better incentives to reduce cost.[35] PC was also seen as a better bridging device toward complete toll market deregulation.[36]

Besides toll markets, the 1982 separation judgment (termed the Modified Final Judgment [MFJ]) gave the seven localised Bell Operating Companies (BOC) an exclusive franchise over a

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33. Wenders, supra, note 4, pp 157-158.

34. Kwoka J.E.jr., *Implementing Price Caps for AT&T,* American Enterprise Institute for Public Policy Research, Conference Paper, October 1990.

35. See Mathios A.D., and Rogers R.P., 'The Impact of Alternative Forms of State Regulation of AT&T on direct-dial, long-distance telephone rates,' *Rand Journal of Economics,* vol 20(3), Autumn 1989, pp 437-453. The authors comment that in States that have introduced price caps, the price of service has fallen in relation to States that have continued to use rate of return regulation.

36. Ibid, p 1. The author says the chairman of the FCC commented: *'Consumer benefits of over one billion dollars were promised over the course of the first four year cycle of price caps. Benefits to AT&T were said to be limited only by its determination to cut costs. All of these gains were to transpire with less burdensome regulation'.*

number of local access transport areas (LATAs).[37] Because of this franchise and the toll-to-residence subsidy, price controls over local operations look set to continue. To achieve this, various state regulators have used controls ranging from price caps, incentive styled rate of return regulation and rate stabilisation schemes. However, some states have completely or partially deregulated telecommunication markets.[38]

The Control of Price; Overview

In telecommunications there may be a need to control prices in local residential markets. This is necessary because with current levels of technology, high entry barriers and inelastic demand, the controller of those facilities can exploit consumers. To control this problem the British, Australian and United States Governments have used formal price control to limit exploitative ability. These controls have the objective of increasing static efficiencies.

While this has been the official reason for their implementation, the controls have promoted the goal of "universal service", because provisions preventing rebalancing have subsidising local calling at the expense of toll. For this reason price controls have promoted public policy instead of efficient pricing.[39] This has seen them retained in markets where competitive pressures no longer warrant their use. Retention has led to inefficient pricing and investment. Bolter explains:

> ... apparently a "price" has been paid for these successes [(universal service)], in the form of economic discrimination, and possibly inefficiency and lagged rates of innovation and technological change. Many observers believe that constraints on entry of potential competitors and acceptance of noncost based rates has produced distorted investment and pricing signals, which have resulted in nonoptimal industry performance.[40]

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[37]. *United States v American Telephone and Telegraph Company,* (1982) 552 F Supp 131 DDC, *aff'd mem. sub. nom. Maryland v United States,* (1983) 460 US 1001.

[38]. Bolter et al., supra, note 29, pp 131-143.

[39]. See Albon R., 'Evaluating Telecom's Cross-Subsidies: Political Favours at a Heavy Cost,' *Australian Economic Papers,* vol 30(56), June 1991. The author comments on the cost of Telecom Australia's universal service obligations and how these obligations have been used as a tool of public policy.

[40]. Bolter et al., supra, note 29, p 83. Also Breyer S.G., 'Antitrust, Deregulation, and the Newly Liberated Marketplace,' *California Law Review,* vol 75, 1987, pp 1005-1047, at 1030. Breyer comments on the distorted investment signals. He states that requiring long-distance telephone callers to pay an access charge to the local network in excess of cost has given high volume callers an incentive to by-pass the local network by providing their own access facilities. In other words, the by-pass problem exists because of regulatory imposed universal service obligations. For additional comment see Wenders J.T., 'Deregulating Telecommunications,' in Meiners R.E., and Yandle B. eds., *Regulation and the Reagan Era: Policies Bureaucracy and the Public Interest,* Holmes & Meier, New York, 1989, pp 104-131, at 111. Wenders explains: *'as administered by the separations process, vertical integration meant that it was impossible for AT&T and its toll customers to escape paying the toll-to-local subsidy. Local costs were simply assigned to AT&T's interstate operation, making them*

Of course these assertions imply that if controls were only used in captive monopoly markets, and if the pricing objective in those markets was to maximise efficiency, then price controls would be an effective control. Yet even this assertion seems invalid because of the adverse incentives the control creates and the inability of the regulator to source sufficient cost information.

For example, with rate of return regulation, the regulator, when determining the allowed rate, must make assumptions concerning the cost of capital to assess the revenue requirement. The regulator must then allocate this requirement over different services to set their price. This process often intensifies inefficiencies because the regulator will establish price based on fully distributed cost allocations (FDC) that will generally deviate from Ramsey optimal prices.[41] Beside these problems, ROR provides little incentive for the regulatee to reduce costs; may provide an incentive not to find the least cost method of production; and can even encourage regulatory proliferation. Proliferation occurs because firms have an incentive to distort pricing information and load costs into regulated markets. Finally, the use of ROR encourages firms to seek regular rate reviews in times of inflation.[42]

All of these factors compound so that when regulators face a rate review, determining efficient prices, those which would have occurred in a competitive market, will be impossible. Wenders provides additional comment:

> Thus, rate of return regulation, separations, and so forth, undoubtedly caused telecommunications services to be provided in a different way at a different cost than in their absence. Unfortunately, we may not know a lot about these distortions, and indeed, since regulation has suppressed the competitive alternative, especially at the local level, they may be unknowable at present.[43]

Price caps rectify many of these problems because they provide an incentive to minimise cost; find the most efficient method of production; and allow for general price movements.[44]

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unavoidable. The only way toll users could avoid paying the subsidy was to bypass AT&T from end to end by building their own telecommunications networks, which some of them did. In contrast, after divestiture, the subsidy became a tariff on a toll carrier's local assess minutes of use. Thus paying the subsidy could be avoided by using private-line service or local facilities to bypass the short toll-carrier-to-local-company leg of a switched toll call'.

41. Meyer et al., surpa, note 4, pp 4-6. Also Cist, supra, note 20, p 40. Cist comments about the subjective nature of cost allocations and how this subjectivity intensifies with facilities that are used for joint production (eg. toll and local).

42. Bolter et al., supra, note 29, pp 123-125.

43. Wenders, supra, note 4, p 232.

44. Although some doubt this finding, see Vickers J., and Yarrow G., 'Telecommunications: Liberalisation and the Privatisation of British Telecom,' in Kay J., Mayer C., and Thompson D. eds., *Privatisation and Regulation: The UK Experience,*

However, price caps may have disadvantages. These disadvantages could cause quality to deteriorate. They may even promote inefficiencies if the cap variables (RPI-X) do not relate to the costs associated with the telecommunications industry. Besides incentive problems, inefficiencies could intensify if the cap covers monopoly and non-monopoly markets. In this case the industry may require supplementary regulation.

Consequently, caps will be more efficient if they only cover monopoly markets. Efficiency results because there will be less potential for anticompetitive rebalancing (predatory pricing) if competitive markets are excluded. However, if the cap includes competitive markets, such inclusion will distort investment. Gist explains:

> ... the inclusion of trunk calls potentially gives greater scope to BT to inhibit the development of Mercury than might otherwise have been the case. Lower prices on trunk calls may be legitimately compensated for by higher prices on local calls. Consumers of local calls therefore lose a degree of the protection they would otherwise have had, whilst the general incentive for competition in long distance is reduced. There is therefore greater scope for rebalancing, and a danger that the question of whether individual prices are cost justified will be raised; exactly the concern which the original Littlechild proposal sought to avoid.[45]

Therefore caps enable greater pricing flexibility, but enable the dominant carrier to exploit consumers.[46]

Essentially, the problem with explicit controls will always be that regulators do not hold sufficient information to make efficient determinations. This problem gets worse because regulated companies have little incentive to comply with such determinations or supply that information. To be fair, governments have acted to solve this problem by requiring their telecommunications companies to separate the affairs of various services in an accounting manner. For example, the Australian Government showed some concern:

> In view of the market dominance of Telecom/OTC, the Government believes it to be imperative that Telecom/OTC undertakes, at a minimum, stringent accounting separation of its various business activities. The aims of these arrangements generally are to prevent cross-subsidisation from parts of

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Clarendon Press, Oxford, 1986, p 232. These authors comment that *'if X is determined by reference to BT's actual costs, we are back to rate-of-return regulation, with all its attendant problems. In particular, if the permissible tariffs depend on the level of costs, then the incentive to cost efficiency is blunted. ... Thus the problems of rate-of-return regulation would appear to be hard to avoid in regulated private monopoly'*.

[45]. Gist, supra, note 20, p 22.

[46]. Vickers et al., supra, note 22, p 213. Also Carsberg, supra, note 5.

Telecom/OTC that do not face strong competition to parts that do and to ensure that each of the main parts of the overall business are specifically encouraged to improve performance.[47]

However, accounting separations will only be of limited use. Therefore subsidiary company formation or vertical divestment will better separate markets and provide less incentive for anti-competitive cross-subsidisation. Horizontal separation could be beneficial because more information concerning the cost and relative efficiency of service provision will be available. As well as separation, alternative forms of regulation could resolve this problem by providing greater incentive to comply. Although price capping steps beyond the limitations of ROR, alternative forms of control may have better compliance qualities and not require additional regulation to augment the primary control.

9.6 Predatory Pricing

Besides exploitative pricing, a dominant monopolist can drive competitors from non-monopoly markets by pricing below economic cost with profits he/she has obtained from a monopoly market.[48] Such tactics are predatory because they limit, prevent or eliminate competitive activity. This allows the dominant carrier, after taking an initial loss, to raise prices above the competitive level.[49] For example, a vertically integrated telecommunications carrier could use local residential profits to price below cost in toll, customer premise equipment and other service markets.

While such tactics have the potential to eliminate competition, there has been debate over when price will be predatory or whether such tactics should be of regulatory concern.[50] This debate has led to the emergence of several schools of thought.

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47. Beazley K., *Telecommunications Micro Economic Reform: Progress*, Transport and Communications, Canberra, November 1990. They also comment on the dangers of cross-subsidisation: *'Cross-subsidy could foster predatory activities that could inhibit the rapid introduction of effective competition. Efficiency improvements within the merged company would not be achieved if it were to support a competitive part of the business with resources which are nominally employed in a non-competitive area. These actions would undermine the purpose of the reforms'.*

48. This is a widely held definition of predatory pricing. See Areeda P., and Hovenkamp H., *Antitrust Law*, Little, Brown and Company, Boston, 1990. Supplement, para 711.1-721 for a survey of other attempts at defining predatory pricing.

49. Larson et al., supra, note 2, p 2. The authors comment that the ability to raise price depends on the monopolist's ability to raise sufficient entry barriers to limit subsequent entry.

50. Ibid, p 3. The authors explain the debate over below cost pricing. *'Though simple in concept [the below economic cost] formulation of predatory pricing raises many unanswered questions. What should be the basis of cost if predation consists of "pricing below cost"? What importance should courts and regulatory bodies attribute to documentary or testimonial evidence of predatory "intent"? Is the price-cost relationship the most reliable index of predatory behaviour and, therefore, the appropriate focus for policymakers seeking to build safeguards against exclusionary conduct? What role should markets*

The cost based school assert that when a firm has economic power, and the price charged falls below short-run marginal cost, those conditions will be sufficient to show predation.[51] The structural filter school use similar criteria, but place greater emphasis on structural characteristics that could inhibit the monopolist's ability to monopoly price in "competitive" markets.[52]

Other schools discount predatory pricing as a threat to competition. The no-rule school, for example, believe other tactics will best achieve the objectives of predation. For this reason they do not favour regulation that limits pricing because of the effects it will have on desirable forms of price based competition.[53] Similarly, the game-theory school believe predatory tactics to be rational in some instances, but believe intervention to prevent these tactics will impose greater costs than benefits. They reach these conclusions because of the difficulty in detecting "rational" predatory conduct.[54]

Irrespective of these views, the ability to engage in predation will, to an extent, depend on the monopolists ability to extract profits from monopoly markets. In the previous section most countries have, through various means, controlled telecommunications pricing by preserving below cost pricing in monopoly markets at the expense of toll. While these tactics could be loosely described as predatory, their imposition on monopoly markets will more likely promote entry in competitive toll markets. For this reason I will assume that these controls do not exist because they do not allow or result in predatory conduct.

In the next section I will discuss the prevention of predatory conduct. To achieve this aim I will initially consider the use of antitrust law as a mechanism to control predation, followed by a discussion of other techniques (although this later discussion will be brief because of coverage in the previous section). Within these sections I will refer to case law and regulatory

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structure variables, such as entry conditions or relative shares of network capacity, play in evaluating predatory pricing episodes? Does asymmetric information lead to plausible predatory pricing scenarios?'

51. See Areeda P., and Turner D., 'Predatory Pricing and Related Practices Under Section 2 of the Sherman Act,' *Harvard Law Review*, vol 88, 1975, p 697. These authors comment that variable cost can be used as a proxy for marginal cost.

52. See Joskow., and Klevorick., 'A Framework for Analyzing Predatory Pricing Policy,' *Yale Law Journal*, vol 89, 1979, p 213. See *Matsushita Electric Industrial Company v Zenith Radio Corporation*, (1986) 475 US 574. The Supreme Court comment that: *'The success of any predatory scheme depends on maintaining monopoly power for long enough both to recoup the predator's losses and to harvest some additional gain. ... For this reason, there is a consensus among commentators that predatory pricing schemes are rarely tried and even more rarely successful'*, at 590.

53. See Bork R., *The Antitrust Paradox: A Policy at War With Itself*, Basic Books, New York, 1978, p 154.

54. See Tirole J., *The Theory of Industrial Organization*, MIT Press, Cambridge Massachusetts, 1988, pp 361-388.

practice in the United States, Australia and New Zealand. I will not consider British antitrust because of the sparse nature of its case law.

9.7 Antitrust Law

American Courts

The ability to take action in America centres on section 2 of the Sherman Act which forbids the monopolisation of or attempts to monopolise markets in trade or commerce.[55] For liability to result the courts must establish a link between the alleged act and the section's requirements. For attempts to monopolise, the plaintiff must prove:

> ... that the defendant (1) specifically intended to control prices or destroy competition in a relevant market, (2) engaged in predatory conduct, and (3) achieved a dangerous probability of accomplishing its unlawful aim. Proof of monopolization requires a showing that the defendant (1) possesses monopoly power in a relevant market and (2) engaged in predatory conduct to attain or preserve its market power.[56]

Case law has developed by primarily relying on a price-cost relationship, although lately issues concerning structure and cross-subsidisation have figured more prominently.[57] The Second Circuit Appeals Court, in *Northeastern Telephone v AT&T,* examined the price-cost relationship. In that case Northeastern alleged predatory behaviour by AT&T in the market for customer premise equipment. The Second Circuit ruled that a price-cost relationship based on long-run incremental cost (LRIC) was the best measure of predation, although a lower trial Court used the "less appropriate" fully distributed cost (FDC). The reason for the distinction was that the appeals Court believed LRIC to be a better method of distinguishing predatory from desirable forms of price competition.[58]

The Seventh Circuit Court of Appeals reached similar conclusions in *MCI v AT&T*,[59] while the Supreme Court went beyond the price-cost relationship in *Matsushita v Zenith Radio*. In the latter case, two American electronics companies alleged that a group of Japanese television

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55. Although section 13 of the Robinson-Patman Act has also been used to attack predatory pricing. See *AA Poultry Farms Inc v Rose Acre Farms Inc,* (1989) 881 F2d 1396 (7th Cir), *cert denied,* (1990) 110 S.Ct 1326. However, its application to telecommunications is uncertain because it only refers to goods and not services (see chapter 11). Besides this Act the Federal Trade Commission can prevent predatory pricing under section 5 of their Act; it is also prevented under a number of State Laws.

56. Larson et al., surpa, note 2, p 10.

57. Ibid, p 20.

58. *Northeastern Telephone Company v AT&T Company,* (1981) 651 F2d 76 2d Cir, *cert denied,* (1982) 455 US 943.

59. See *MCI Communications Corporation v AT&T Company,* (1982) 708 F2d 1081 7th Cir, *cert denied,* (1983) 464 US 891.

manufacturers were attempting to destroy rival American manufacturers by using profits obtained in Japan to engage in predatory activities in America. To form judgment the Supreme Court combined structural considerations with the more traditional price-cost techniques. The Court took this approach because of concern that strict price-cost techniques failed to consider the possibility of market entry following successful predation. The Court observed:

> The success of any predatory scheme depends on maintaining monopoly power for long enough both to recoup the predator's losses and to harvest some additional gain ... fo this reason, there is a consensus among commentators that predatory pricing schemes are rarely tried and even more rarely successful.

Finally, when considering cross-subsidisation, the Supreme Court found no evidence that monopoly pricing in one market automatically led to predatory pricing in another. That, it said, was a question of fact.[60]

The Supreme Court's treatment of predation in *Cargill v Monfort* further deviated from the price-cost relationship of *Northeastern*. Essentially, the Court considered that below cost pricing did not necessarily lead to predation; structural issues, which could facilitate successful predation (primarily the ability of a firm to absorb market share and the height of entry barriers within the industry), were more important.[61] The First Circuit Court of Appeals discussed similar issues in *Clamp-All v Cast Iron Soil*, although cross-subsidisation was also an issue. In this regard the First Circuit considered it was not a concern of the court where the funds came from - the only issue was the act of predation.[62]

Finally, in *Poultry Farms v Rose Acre* the Seventh Circuit Court of Appeals reviewed the development of predatory pricing over the last eight years. It established a rule to only investigate predatory conduct if industry structure allowed the monopolist to recoup the loss resulting from predation. In other words, structural considerations were the prime determinant of the need for additional action.[63]

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[60]. *Matsushita Electric,* (1986) 475 US 574. For further discussion see Taperell G., 'Misuse of Market Power in Telecommunications: The Legislative Safeguards,' in Corones S.G. ed., *Competition Policy in Telecommunications and Aviation,* The Federation Press, Sydney, 1992, pp 179-197, at 196.

[61]. See *Cargill Inc v Monfort of Collorado Inc,* (1986) 479 US 104.

[62]. See *Clamp-All Corporation v Cast Iron Soil Pipe Institute,* (1988) 851 F2d 478, 1st Cir, *cert denied,* (1989) 488 US 1007.

[63]*AA Poultry Farms,* (1989) 881 F2d 1396 (7th Cir), *cert denied,* (1990) 110 S.Ct 1326. In justifying this approach Judge Easterbrook observed that: *'If there can be no "later" in which recoupment could occur, then the consumer is an unambiguous beneficiary even if the current price is less than the cost of production. Price less than cost today, followed by the competitive price tomorrow, bestows a gift on consumers. Because antitrust laws are designed for the benefit of consumers, not competitors, ... a gift of this kind is not actionable'*, at 1401.

Australasian Courts

Australasian courts have likewise discussed predatory issues under general monopoly law (section 46 of Australia's Trade Practices Act and section 36 of New Zealand's Commerce Act). However, unlike America, Australasian courts have not considered structure; cross-subsidisation; or the price-cost relationship to the same degree. Instead, discussion has centred on the "subjective" purpose of the action to determine its predatory nature.[64] This approach was adopted in the *Victorian Egg Marketing Board* case. In this case the Federal Court was emphatic in its desire not to use a price-cost test. Bowen CJ explains:

> I leave open the question whether in the ordinary course a monopolist can engage in predatory price-cutting only if the price is below some particular cost, and not where the price set, although it may deter competitors, is one which merely does not maximise the monopolist's profit. It may be that where one can infer the requisite purpose from other evidence, price-cutting may be predatory in the sense referred to and a 'taking advantage' of power derived from the substantial control of a market, notwithstanding that it is not below marginal or average variable cost and does not result in loss being incurred.[65]

This case concerned the pricing of eggs by the Board in a neighbouring state. The defendant alleged, and proved, that the board had engaged in predatory tactics by pricing eggs at below the price charged in its home state of Victoria. The Court applied similar reasoning in *TPC v CSBP* where they concluded that deviations from normal pricing practice may be predatory, but when reviewing the pricing structure in this case it did not find abnormality.[66]

More recently the Federal Court, in *Tytel v ATC,* considered predatory pricing as it related to the importation of telephone equipment to the Australian market. The case revolved around ATC's exemption from importation duty and the competitive advantage this exemption gave. To account for this difference ATC usually loaded the price of its products so that competitors could participate in the CPE market. However, in this instance ATC did not, but even when it did, competitors still faced a significant cost disadvantage. For this reason the Court did not find the later action predatory.[67]

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[64]. For a discussion of subjective purpose in predatory cases see *Eastern Express Limited v General Newspapers Pty Limited & Ors,* (1992) ATPR 41-167, at 40,303. The Court explain: *'The determination of purpose for the operation of s 46 is to be ascertained subjectively, ... "Purpose" ... is not concerned directly with the effect of conduct, but with "purpose" in the sense of motivation and reason, ...'.*

[65]. See *Victorian Egg Marketing Board v Parkwood Eggs Pty Ltd,* (1978) ATPR 40-081.

[66]. See *Trade Practices Commission v CSBP & Farmers Ltd,* (1980) ATPR 40-451.

[67]. See *Tytel Pty Ltd v Australian Telecommunications Commission,* (1986) ATPR 40-711. Jackson J left open the question of whether the ATC breached section 46 by not initially loading the price.

In 1992 the Full Federal Court of Australia, in *Eastern Express v General Newspapers*, considered the claim of Eastern that General had engaged in predatory pricing tactics to retain real estate advertising. At first instance, and on appeal, the Courts dismissed this claim. However, on appeal the Full Court over turned the trial Court's finding that General had a dominant position in the relevant product market. The Full Court reached this conclusion because although the trial judge was correct in finding entry barriers, Eastern's shareholding agreement limited the effect of these barriers.[68]

Following that finding the Full Court went further to discuss when pricing would be predatory. Its members agreed with the trial judge on a number of counts. Firstly, that price cutting without regard to financial effect could constitute predation; secondly, the "purpose" behind these acts must be predatory; and finally, the Court must construe purpose with reference to "material" facts it has before it. In this regard the Court must consider the circumstance of the claim.[69] For these reasons the price-cost based tests may not be relevant:

> A fundamental issue in these cases as they occur in Australia is whether the corporation in question used its market power for a purpose proscribed by s. 46. The issue will be tried by Judge of the Court sitting alone. It will be for the Judge to decide whether the existence of the proscribed purpose may properly be inferred, with or without the aid of other evidence, for evidence of the conduct of the corporation in relation to the prices it charged. No preordained and fixed categories as to the level of pricing or economic theory or practise of costing necessarily control the drawing of that inference in any particular case. Whether the finding as to purpose which is sought against the corporation should be inferred from the evidence as to pricing must be judged by considering not only the logic of the matter. The Court must also consider whether "general human experience" would be contradicted if the conduct which occurred were unaccompanied by the purpose sought to be proved.[70]

Then the Court went further to consider the issue of remedy. Of primary concern to its members was the Court's inability to frame appropriate injunctive relief. This difficulty stemmed from the desire to prevent predation, but at the same time not interfere with "normal and legitimate" pricing.[71]

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[68]. *Eastern Express*, (1992) ATPR 41-167, at 40,302. The Full Court commented: *'Whatever market power the respondents may have enjoyed before arrangements were in place which led in due course to the publication of the Eastern Express because of the quota and shareholding arrangement of the appellant introduced in 1989, the Wentworth Courier did not enjoy a substantial degree of market power and could not determine its advertising rates irrespective of the actions of its competitor'.*

[69]. Ibid, at 40,303-05.

[70]. Ibid, at 40,307-08.

[71]. Ibid, at 40,308. Also see Taperell, supra, note 60, at 197.

Discussion concerning predation has been sparse in New Zealand, although it was briefly discussed in *Union Shipping v Port Nelson*. In that case the High Court commented that when interpreting purpose, the mere pricing of goods below cost will not be sufficient to infer predatory conduct - something more must be shown. For example, below cost pricing may not constitute predation if it reflects a desire to quit excess stock.[72]

Antitrust Summary

From this discussion it seems that antitrust laws have an important part to play in determining when a dominant party has engaged in predatory pricing. Within each jurisdiction the approach to enforcement differs; for example, the American courts take a structural/price-cost approach while the New Zealand and Australian courts focus on purpose.[73] Of course when determining liability the most important issue will be to distinguish between competitive and anti-competitive price cutting; that will always be a question of fact. Once determined the courts must the focus on the most appropriate form of relief.

9.8 Other Approaches to Restraint

Apart from antitrust law, there are other approaches that restrain predatory activity. Some of these approaches were discussed in the previous section. They include the capping or controlling of prices in monopoly markets and the separation of business activity. Both controls effectively prevent cross-subsidisation from monopoly to non-monopoly markets.

Besides these approaches, regulatory bodies have used other measures to control predation. The Australian and British Governments have used carrier licencing provisions to protect against the possibility of predation.[74] The Federal Communications Commission (FCC), the regulatory body presiding over telecommunications in America, has also developed a series of predatory safeguards. It has established net revenue tests to allow price discounts

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[72]. See *Union Shipping New Zealand Limited v Port Nelson Ltd,* (1990) 3 NZBLC 101,618 at 101,647.

[73]. *Eastern Express,* (1992) ATPR 41-167, at 40,306-09. In this case the appeal court distinguishes American and Australasian law by the way in which American judges interpret statute; they comment: *'We have devoted some attention to this authority because it shows, by way of illustration, that the United States decisions as to what is meant by "predatory pricing" are judge made law which does not focus directly upon the specific terms of the antitrust laws'.*

[74]. Taperell, supra, note 60, pp 182-186. The author notes that if AUSTEL considers the Trade Practices Commission can more adequately handle a predatory pricing claim (for example), the Telecommunications Act allows AUSTEL to refer that case the the Trade Practices Commission.

provided net revenues associated with these services increase.[75] It has even considered using price caps that place a lower limit on price.[76] The FCC has also sought to distinguish the affairs of regulated and non-regulated activities by initially requiring structural separation and, more latterly, accounting separation.[77] The Courts and Governments of various countries have also had a part in this process by prohibiting monopolies from engaging in certain forms of business activity. Such prohibitions prevent predation, as will the obligation on dominant parties to engage in commerce using non-discriminatory practices.[78]

Using these techniques, regulators *`employ tools that will prevent predatory pricing before it is allowed to occur'*.[79] These tools deem price to be predatory when it falls below some articulated definition of cost. The problem with this standard is that determining predation conduct relies on an arbitrary definition of cost; moreover the price-cost standard that determines predation gives little incentive or flexibility for regulated entities to price in a competitive manner. In other words, regulators place extensive reliance on the price-cost relationship rather than examining other perhaps more important issues relating to structure. Therefore cost based techniques will most likely penalise desirable "competitive" pricing, so for this reason should be discouraged.[80]

9.9 Regulatory Recommendations

The objective of the 1988 liberalisation of telecommunications markets in New Zealand was to create *`efficient and fair markets in telecommunications goods and services'*.[81] With this objective in mind, efficient cost based pricing will be a key determinant of efficiency.

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75. See Federal Communications Commission, *Guidelines for Dominant Carriers' MTS Rates and Rate Restructure Plans: Memorandum Opinion and Order*, CC Docket 84-1235,50 Fed.Reg. 42,946, 1985.

76. See Federal Commerce Commission, *Policy and Rules Concerning Rates for Dominant Carriers*, CC Docket 87-313, Notice of Proposed Rulemaking, 2 FCC Rcd 5208, 1987.

77. See Federal Commerce Commission, *In the Matter of Separation of Costs of Regulated Telephone Service from Costs of Nonregulated Activities, Report and Order*, CC Docket 86-111, 2 FCC Rcd. 1298, 1987.

78. For authority see, Larson et al., supra, note 2, p 8.

79. Larson A., 'Predatory Pricing Safeguards and Telecommunications Regulation,' in Crew M.A. ed., *Competition and the Regulation of Utilities*, Kluwer Academic Publishers, Boston, 1991, pp 53-54.

80. Ibid, pp 53-54.

81. Ministry of Commerce, supra, note 12, p 1.

Efficient pricing will be important because it will cause optimal consumption. It will also have wider importance because it will result in consumers and network operators making optimal investment decisions.[82] Therefore controls should prevent the monopolist from exploiting monopoly markets. They should also limit the potential for predation in competitive markets. Controls should not implement the goals of public policy (for example, a "universal service" obligation), other tools should achieve this end.[83] Kahn et al. clearly explain that regulators should strive for efficient telecommunications pricing:

> Whatever the historic justification for the system of pricing still in effect today, it has long since disappeared. Its social cost today is to be reckoned not merely in terms of a multi-billion dollar annual static welfare loss, but, perhaps even more important, in the ways in which it has discouraged the exploitation of one of our most dynamic, versatile technologies. The residual need served by it can be achieved in other ways at only a small fraction of that cost.[84]

Likewise, governments should not use regulatory tools when competitive pressure can adequately regulate - not even perfectly regulate activity. The FCC comment:

> The Federal Communications Commission is committed to deregulation of competitive telecommunications markets. We believe that the interplay of competitive market forces can best determine the services that should be available to the public. For this reason, the FCC is strongly promoting new entry and the development of new services. And, when deregulation is not yet possible, in markets where competition is still developing or where competition is imperfect for reasons beyond the FCC's control, the FCC is committed to regulatory improvement and development of transitional measures that promote the development of competition.[85]

The FCC resolution rides on the definition of "effectively". Its interpretation determines whether a government will place controls in markets where cost and demand conditions enable competitive rivalry. Therefore, when considering placement, a competitor need not be "in" a

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[82]. A criticism of non-usage based, and below cost based pricing in telecommunications has been that it causes overconsumption and therefore overinvestment in local services. In this regard see Cave, supra, note 22. He comments *'in the area where competition is infeasable or inefficient, care must be taken to provide a regulatory framework sufficiently stable to justify investment by the incumbent'*. Also Holmes, supra, note 22, p 223. And Crook J., *The New Zealand Economic Experience from Telecommunications Deregulation and Competition*, PTC Conference on "Opportunities for the Economy", Auckland, 16 October 1992. When describing the investment implications of the kiwi share, Crook states: *'The "kiwi share" constraints are also inhibiting the development of efficient competition. For example, it is little surprise that there are not many competitors waiting to enter the market for providing services to residential and rural customers. Who wants to compete against a subsidised service? What is more, the "kiwi share" also has the effect of making this an unattractive area for Telecom to invest"*. He goes on to comment about the adverse investment effects in competitive markets.

[83]. For example, section 7 of the State-Owned Enterprises Act allowed for state subsidisation of services that would otherwise not be commercial. Targeting specific groups by using the Department of Social Welfare could be another alternative.

[84]. Kahn et al., supra, note 3, pp 191-256, at 255-56.

[85]. Statement of Mark S., Fowler before the House Subcommittee on Telecommunications, Consumer Protection, and Finance, February 17, 1982, p 1.

market for competitive rivalry to exist - competition "for" that market will push price toward cost.[86] For this reason the Government should not regulate these markets because short-term exploitation will more rapidly encourage entry than if controls limited profitability now (New Zealand's Kiwi Share does not cover "competitive" markets). Of course the ability to enter will invariably depend on the competitor gaining fair and reasonable interconnection with the incumbent. While true, the formulation of such agreements does not fall within the scope of this chapter. For that see chapter ten.[87]

Once it has been decided not to control competitive markets, the concern then shifts to the control of price in monopoly markets. To determine if price should be controlled one should first ask the question whether the monopolist can exploit a market, then whether the scale of exploitation justifies intervention. Undoubtedly Telecom can profit in local residential areas because of entry barriers; current levels of technology and demand; and the captive nature of its consumers. Given the inelastic nature of demand, Telecom could extract substantial monopoly profits.[88] Therefore some form of control would seem warranted.

When selecting a control, the Government must decide between separating or regulating the natural monopoly. The British experience with electricity suggests that horizontal separation can reduce the need for regulation by promoting inter-monopoly competition. However, separation is not the solution for telecommunications because the changing nature of technology will not make the benefits of separation outweigh long-run costs (even when related to the net cost of regulation). Similarly, the formation of subsidaries and profit centres will not help achieve this because common ownership gives these enterprises no incentive to compete. For this reason the Government must control price with regulation.[89]

When selecting a control, the type will depend on whether the benefits from its implementation (reduction of social loss) exceed associated costs.[90] But the Government will find it difficult to determine whether net benefits result because they will find it difficult to

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86. See Baumol W., Panzer J., and Willig R., *Contestable Markets and the Theory of Industry Structure,* Harcourt Brace Jovanovich, San Diego, 1982.

87. See chapter ten for more detail. Beesley et al., supra, note 19, pp 73-74. While fine in theory, these authors question the ability to distinguish between monopoly and competitive markets.

88. Touche Ross, supra, note 7, pp 53-59, 86-87.

89. Jarden, supra, note 5, p 112.

90. The Commerce Commission, *Price Control: A Guide for Staff,* Unpublished Internal Document, August 1991, p 12.

estimate the size of social loss; the extent to which the control reduces that loss; and the costs of administering the regime. Besides these factors, the control could delay future entry and become permanent when initially it was designed as a temporary measure (for example, the US experience with AT&T).[91] The control may even promote inefficiencies; cause a need for additional regulation; and make the regulator captive to the monopolist's rather than the public's cause.[92]

Thus, the Government must select a control that avoids as many of these problems as possible. In this regard the Government must select between "light-handed" or "heavy-handed" controls. A light-handed approach has the advantage that the resulting controls are most likely to encourage efficiency and innovation; minimise the burden of regulation; promote and maintain effective competition; and allow the incumbent the flexibility it needs to operate. Heavier-handed techniques, on the other hand, are less likely to fulfil these aims, but more likely to protect consumers against monopoly pricing.[93] They are also easier to move to, rather than move from, should a light-handed regime not control the monopolist?[94]

So to provide the greatest potential for net benefits and the most potential for flexibility, the Government should use a light-handed regulatory solution (New Zealand's Kiwi Share does not provide this flexability). This solution should direct the monopolist toward cost based pricing, but also provide the monopolist with sufficient incentives to conform. Such incentives should place the regulatory burden of proof on the monopolist. The Government should force the monopolist to justify its pricing; provide a threat of additional regulation, should the light handed mechanism prove ineffective; and make compliance to that regulation costly. For these reasons the monopolist will have the incentive to comply with the light-handed regime.

Adopting this solution has advantages in that it will fit within the spirit of liberalisation by reducing the need for explicit regulation. It will also avoid the problems associated with ROR or PC.[95] This approach will constrain the monopolist, but allow for the rebalancing of tariffs and the implementation of pricing policies designed to encourage the efficient use of resources.

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91. Littlechild S.C., *Deregulation of Telecommunications in New Zealand,* Consultants Report, 11 January 1987.

92. Meyer et al., supra, note 4, pp 201-202.

93. Littlechild, supra, note 18.

94. Jarden Morgan, supra, note 5, pp 46-47.

95. Ibid, pp 45-48.

For example, the monopolist could introduce usage sensitive calling rates for local service and charge an access fee.[96]

To police the pricing threat the Government could rely on consumers to voice their concern. To increase the credibility of the threat, the Government could implement its own monitoring regime. This regime will most likely detect abuse if it requires Telecom to form subsidiary companies that separate the monopoly from areas with competitive potential. However, because changing technology promises to erode many of the benefits associated with separation, accounting separation would seem the most appropriate form of separation.[97] These separations will allow the Government to detect, through the use of an independent audit report, the validity of Telecom's separation process. This process will more readily determine whether the monopolist has exploited his/her dominant position.[98]

As an alternative to an independent audit report, the Government could require Telecom to publish information concerning its cost allocation process. The Government could also request disclosure so it can compare the costs and results of Telecom with those of overseas telecommunication companies. It could also obtain related information from overseas regulators for use in New Zealand (for example; AUSTEL, OFTEL, FCC and OECD studies).[99] Requesting these disclosures and separations will, in turn, provide the dominant party with a greater incentive to price based on cost.

Besides monopoly market concerns, the Government should limit the potential for a vertically integrated monopolist to successfully predatory price in non-monopoly markets.

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[96]. See Crew M.A. ed., and Dansby R.E., 'Cost-Benefit Analysis of Local Measured Service,' in *Regulatory Reform and Public Utilities*, Lexington Books, Lexington Massachusetts, 1982, pp 35-62, at 35. These authors comment on the advantages of Local Measured Service (LMS) over flat rate charges. (1) LMS enables a public utility to reduce costs because LMS reduces the number of local calls; (2) LMS tariffs can more closely reflect the costs of service; (3) LMS can more effectively reduce the need for subsidy to local service from toll services; ... and (4) LMS enables the utility to introduce peak-load pricing. For further work on efficient telecommunications pricing see Kahn A., 'The Next Steps in Telecommunications Regulation and Reserach,' *Public Utilities Fortnightly*, 19 July 1984; also Kahn et al., supra, note 3.

[97]. Beazley, supra, note 47, p 5. Also Pengilley, W., 'Deregulation or Re-regulation,' in Corones S.G. ed., *Competition Policy in Telecommunications and Aviation*, The Federation Press, Sydney, 1992, pp 111-178, at 164-65.

[98]. Kahn et al., supra, note 3, p 199. The authors appear to accept the validity of accounting separation and that regulators should not control prices in "competitive" markets. They comment: *'So long as regulation of POTS for households and small business continues to be necessary, the only logical solution, ultimately, is total deregulation of the other services and total separation of their revenues and the costs assisnted to them from the rates that continue to require regulatory attention'.*

[99]. For example, see OECD, *Performance Indicators for Public Telecommunications Operators*, OECD Publications Service, Paris, 1990. This report provides a framework by which performance indicators from different countries can be used as a "yardstick" in particular countries.

While accounting separations and the controlling of price in monopoly markets will go some way to prevent this practice, consideration should be given to other controls that will limit this potential. When determining what these controls should be, the Government must not limit the monopolist's ability to "competitively" price. Therefore controls placing a lower limit on price should not be used, nor should controls based on cost or revenue fluctuations.

Antitrust law would seem to be the most appropriate mechanism to prevent predation. It removes the rigidity associated with regulatory "rules" by allowing the courts to consider structural and surrounding factors that may explain a price reduction. It also fits in with the regulatory solution adopted in the monopoly market because it represents a light-handed form of regulation that relies on the dominant party to alter its conduct. For these reasons antitrust provides a more flexible solution to the predation problem; it will most likely promote efficiency.

The regulatory tools selected have primarily been light-handed. They attempt to push cost onto private parties when they obtain private benefit. When that benefit is public, on the other hand, the costs are shared between the Government and the dominant party. However, relying on light-handed controls will not always force compliance (even if a threat of additional action exists). Therefore the Government should detail its likely regulatory response should the current regime prove unsuccessful. Such action has the added benefit of further increasing the certainty, which will, in turn, increase the credibility of response. These benefits will give a greater incentive to comply.

These "likely" responses could vary and should not necessarily lead to the imposition of price controls or strict regulatory price-cost rules. For example, guide-lines could be released concerning the desirability of not pricing below marginal cost and not pricing above the "stand-alone" cost (again disclosure would police these requirements). Protection could also be achieved by preventing the monopolist from "deaveraging" costs from one market to another. Prevention would see residential prices pegged to, for instance, "competitive" business or toll prices. Similarly, rural toll prices could be pegged to inter-city toll prices.[100]

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[100]. See Department of Trade and Industry, supra, note 2, appendix two, statement by OFTEL, para 5 and 39. OFTEL comment on the desirability of limiting the extent of deaveraging. It justifies this stance to provide incentive for Mercury to "roll-out" its competing network. I contend this should not be the goal of limiting deaveraging because it will distort investment; in other words, limiting deaveraging is a tool of public policy. For commentary see Leonard P., and Walters

However, if pricing continues to be excessive, one should not abandon the option of "heavier-handed" price controls or other regulatory safeguards. In this regard the Government should select incentive styled controls over ones that do not have this property.[101] Nevertheless, the above solution is an attempt to provide an environment that will best ensure efficient entry, while at the same time recognising that the incumbent must be able to respond competitively to entry. In this way it offers flexibility but does not limit the potential for future action should that flexibility be used for an anti-competitive purpose.

9.10 Conclusion

The purpose of this chapter was to develop a framework that would ensure that industry pricing was at least efficient. The basic premise of the framework was that when possible, competitive pressure should "regulate" price because this would most likely ensure efficiency. However, natural monopoly characteristics, entry barriers, and captive custom do not always make this possible so measures to restrain price should be considered.

Historically, these price controls have promoted public policy. This should not be the purpose of control. Controls should seek to promote efficient outcomes so that up and downstream consumption and investment will also be efficient and, therefore, welfare maximising. Thus I selected a "light-handed" approach to regulation because it has scope to be the least distorting, while at the same time not preventing or limiting future options should that approach prove ineffective.

P., 'Regulating for Competition: The Telecommunications Act 1991,' in Corones S.G. ed., *Competition Policy in Telecommunications and Aviation*, The Federation Press, Sydney, 1992, pp 73-110, at 102-03.

[101]. For example, the Government should consider two-part tariff schemes like the one proposed by Sibley. Similarly, price caps have superior incentives to rate of return regulation.

Chapter Ten
Interconnection

10.1 Introduction

Interconnection occurs when a service moves from one network to another or from one transmission mode to another. This process will often "by-pass" an existing network because an alternative network provider will offer service by replicating part of an established network.

In this chapter I will examine the need for interconnection. This occurs when a natural monopoly makes it impossible for an alternative supplier to replicate an entire network, but desirable if these characteristics do not exist. In this regard I will examine policies by which alternative countries have achieved connection by first looking at New Zealand, then those of Britain, Australia and the United States. From this review I will consider the path New Zealand could adopt if the current approach proves unsatisfactory.

10.2 The Need for Interconnection

Within telecommunications there are parts of the network that have characteristics resembling those of a natural monopoly. In other parts, demand and technology changes have removed these characteristics to make competition possible, but limited if replication of the natural monopoly must occur. To prevent "inefficient" replication and maximise efficient competition, competitors could interconnect by providing alternative switches and line to that of the established local loop. The Ministry of Commerce explains:

> Elements of natural monopoly are most evident in the provision of local services for residential and small business consumers. Economies of scale and scope act as a barrier to facilities-based entry because there is insufficient traffic to justify the sunk investment, which is primarily cables in the ground. The lack of competition, given current technology, acts as a major impediment to competition in many other areas of the telecommunications market in the absence of fair and reasonable interconnection.[1]

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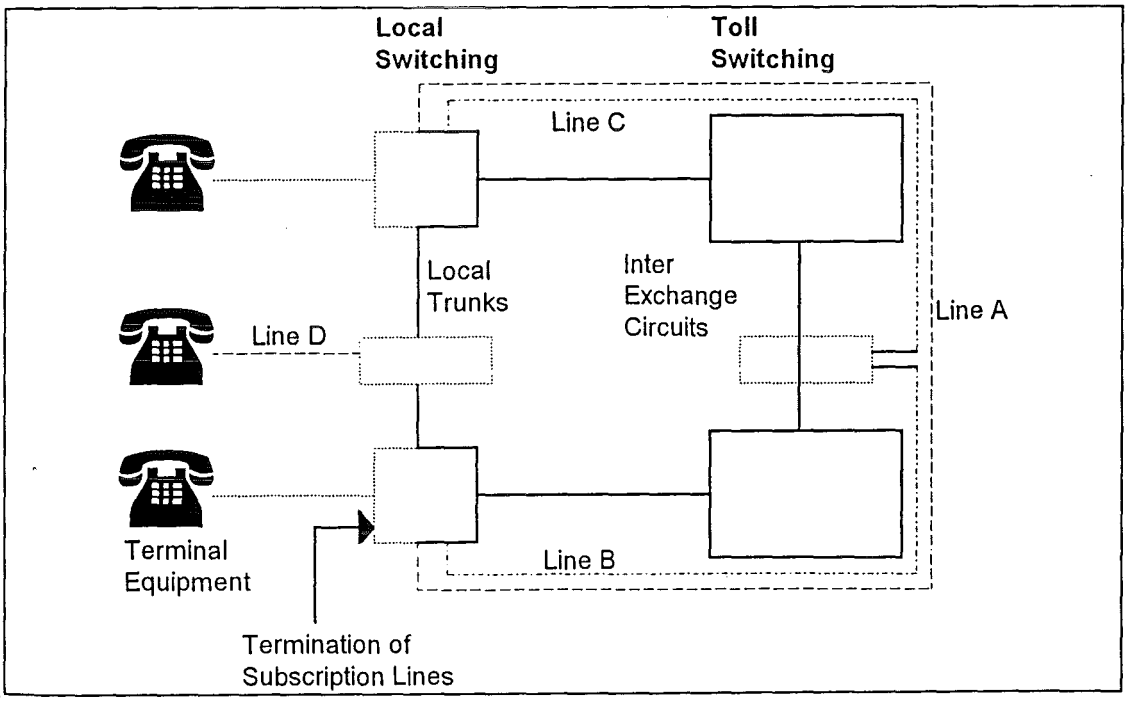
[1]. Ministry of Commerce, *Guarantee of Access to Essential Facilities,* Discussion Paper, Wellington, December 1989, p 11.

The need for interconnection will depend on the demand and technology characteristics associated with any given part of a network. Interconnection will allow competition. That competition will promote efficiencies by giving all organisations an incentive to reduce costs now and in the future. Consumers will also benefit because cost reductions and competitive pressures will force prices toward cost and give them a better level of service[2]

When considering replication, alternative suppliers could provide their own toll network and seek interconnection with an incumbent's local operation (line A). In this instance a toll caller will initially use the incumbent's network, then pass to the competitors, then pass back to the incumbents. Alternatively, the supplier may replicate part of the toll network, so must use the incumbents for part of any call (lines B or C). An alternative supplier could also operate a local network (usually to large business customers), so interconnection must allow the incumbent to access a competitor's network (and vice versa) so that calls can be terminated between networks (line D). In figure 10.1 network interconnection allows lines A, B, C and D to "by-pass" a portion of the incumbent's network; they do so at points of interconnect (POI).

Network Interconnection



(figure 10.1)

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2. See Carsberg B., 'Injecting Competition into Telecommunications,' in Veljanovski C., *Privatisation & Competition: A Market Prospectus,* Institute of Economic Affairs, London, 1989, p 83. Also see Crook J., *How Realistic is Open Competition?,* 1991 Australian Telecommunications Law and Policy Symposium, Sydney, 26 September 1991, p 7.

Of course merely granting access will not ensure that competition develops in an efficient manner; for this to happen alternative suppliers must obtain terms that are fair and reasonable with those of an incumbent. The terms of agreement could relate to technical standards required to connect; the points where connection can occur; access to information for billing purposes; and the need for telephone numbers to allocate subscribers. A special component of these terms will be price, because if the monopolist sets price too high or low, this will affect the efficiency of, and ability to enter.[3] Counsel for Telecom explain:

> ... if uneconomic or inefficient entry is artificially facilitated or otherwise allowed - supposedly in the interests of promoting competition through increasing the number of firms in the market - the cost to society in the form of misallocation of scarce resources and in higher consumer prices may be very high.[4]

Therefore to prevent distortion, price should relate to cost. Costs will include the initial cost of connection, a call usage cost and any network expansion costs.[5]

In a competitive environment these terms will tend toward being fair and reasonable because negotiating parties will have equal bargaining strength. Terms, especially in the local market, will reflect a sense of ubiquity in that any given telephone company will depend on its competitors to either originate or terminate calls. In other words, subscribers cannot make a call unless it can pass to another's network (line D).[6] Ubiquity may not, however, occur in deregulated telecommunication markets because a vertically integrated natural monopoly will give the monopolist power to refuse or delay entry and provide entry on a discriminatory basis. For example, the monopolist could delay the negotiation process; take time to detail technical standards; or could even make these standards more onerous for the competing entity. To prevent entry the monopolist could run its capacity down and refuse or delay granting

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3. See Rothwell W., 'Australia's New Telecommunications Regime: Optimising Competition For Cautious Consumers,' in Corones S.G. ed., *Competition Policy in Telecommunications and Aviation*, The Federation Press, Sydney, 1992, pp 233-244, at 239.

4. *Clear Communications Ltd v Telecom Corporation of New Zealand Ltd and Others*, CP590/91, p 18-19, Telecom's closing submissions, p 11.

5. Beesley M.E., and Laidlaw B., *The Future of Telecommunications: An Assessment of the Role of Competition in UK Policy*, Institute of Economic Affairs, London, 1989, pp 26-28.

6. *Clear Communications Ltd*, CP590/91, *Brief of Evidence of Nina W. Cornell*, pp 4-5. She comments: *'Switched telecommunications services are network services that almost always require interconnection of as many parties as possible. The more parties that are connected to a network, the more valuable the service is to the customer. This characteristic makes switched telecommunications services almost unique when compared to other goods and services. Any entrant wanting to provide a competitive switched service must be able to offer the same ability to reach as many parties as does the existing service provider, what I call ubiquity of reach. If the entrant cannot serve all customers immediately, ubiquity of reach can only be achieved through interconnection with another carrier. Without ubiquity, no customers will subscribe to the entrant's service'.*

competitors points of interconnect. Delay will cause a competitor to use the monopolist's network to terminate or originate calls (ie. line B instead of A).

Besides granting interconnection, the monopolist could limit competition by refusing to provide competitors with information concerning call origination. This denial will limit competition because competitors could then only offer subscribers 100% call destination, but not 100% call origination (therefore a competitor could offer service B but not C or potentially D). To limit competition the monopolist could also refuse to provide competitors with telephone numbering blocks or require subscribers of the competitor to use an access code to reach the competitor's network.[7] Whether these issues are anti-competitive has been the subject of debate, with incumbent parties alleging that caller information is commercially sensitive and that access codes allow callers to differentiate between networks. The issue of price has also caused debate, with the monopolist arguing that price should incorporate part of the cross-subsidy they must pay to support local operations (access charge).[8]

In this regard the issues surrounding interconnection are complex, but regulation should ensure interconnection and that the terms of connection are fair and reasonable. The remainder of this chapter will focus on the approach of countries to achieve this.

10.3 The Approach to Regulation in New Zealand

In New Zealand the Government, through section 6(1) of the Telecommunications Act 1987, relies on inter-party negotiation to achieve interconnection, although section 6(2) allows the use of the Commerce Act should parties not agree on connection terms. This allowance pushes the cost of resolution onto the parties rather than the Government. The Government has also used policy statements to guide negotiation and to threaten parties should the current regime prove ineffective. For example, when liberalising the industry the Minister of State Owned Enterprises, the Hon. Richard Prebble (MP), announced:

> The Government recognises that for effective competition with Telecom to occur competitors must be able to negotiate with Telecom for fair and reasonable access to Telecom's network. ... The Government believes and expects that Telecom will formulate an interconnection policy which allows an efficient competitor to have a fair chance of competing with Telecom. The Commerce Act provides a set of rules which place restrictions on the abuse of dominant market positions. ... If there is evidence that Telecom is acting anti-competitively and that the existing law is insufficient, pro-competitive measures will be considered. The Government, however, believes that it is important that the industry be permitted to

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7. See the Commerce Commission, *Telecommunications Industry Inquiry Report,* Wellington, 23 June 1992, pp 5-6.

8. *Clear Communications Ltd,* CP590/91, p 18-19, Telecom's opening submissions.

> develop with minimal regulations so that an objective assessment can be made about the performance of Telecom, the industry and the adequacy of existing competition laws.[9]

In response Telecom committed itself to interconnection on fair and reasonable terms.[10] It produced a guidebook informing customers what Telecom will do for them and what it expects of them (see appendix three for a summary). However, faced with privatisation, the Government was unsure of this continued resolve, so they placed additional requirements on Telecom to "promote" entry. These included publishing audited financial statements for its four regional operating companies and information concerning *`prices, terms and conditions for the supply of certain prescribed telecommunications goods and services'*.[11]

With this framework Clear Communications Ltd negotiated an interconnect agreement, which enabled it to offer a competing toll service in May 1991. However, that process took two years and even now there are unresolved issues. Clear has also had problems negotiating a local to local interconnect agreement, while BellSouth's cellular negotiations have faced similar difficulties. These problems have led both organisations to criticise current regulatory practice because of its inability to quickly resolve interconnect problems.[12]

Both parties have proposed that the Government take a more active role in this process. For its part the Government responded by issuing a policy statement reiterating current policy (see appendix four):

> It is essential that interconnection is achieved between Telecom and other competitors in telecommunications markets, including local calls, domestic and international long distance calls, and cellular services. ... To this end, the Government will expect all parties to act in good faith; to expedite negotiations, and any court actions; recognise the unique regulatory features of New Zealand's telecommunications market.[13]

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9. Prebble R. hon., Minister of State-Owned Enterprises, *Statement*, 17 December 1987.

10. Trotter R., Chairman of Telecom. Trotter wrote a letter to the Minister of Commerce that outlined Telecom's interconnection policy. A passage commented: *'Telecom's policy to ensure that interconnection will be provided to competitors on a fair and reasonable basis, and that the relationships between Telecom companies will not unfairly disadvantage competitors'.*

11. Ministry of Commerce, *Telecommunications Information Leaflet No. 4: The Telecommunications (Disclosure) Regulations 1990*, Wellington, 25 September 1990.

12. See Martin F., *Clear Pleads for Govt Policy Help in Bitter Phone Company Fight*, National Business Review, Auckland, 14 February 1992. Also Ratner P., 'International Private Sector Perspective,' *Competition Policy: David and Goliath?*, New Zealand Institute of Public Administration, vol 9(1). Cabinet Committee Paper, *Telecommunications: Regulatory Statement*, Wellington, 26 November 1991, p 4.

13. Williamson M., hon, Minister of Communications, 9 December 1991. For the full statement see appendix three.

Yet this statement differs from prior releases in that the Government undertakes to review the regime after 30 June 1992. If progress after that date has not been significant, it undertakes to consider further measures.[14]

Besides competitors, others have criticised this regulatory regime. In a recent report the Commerce Commission concludes that current regulatory policy does not fully address Telecom's dominance and therefore does not remove obstacles to the development of competition. It is critical of the disclosure regulations, commenting:

> ... [they do] not provide significant assistance in removing any of the obstacles to the development of competition. ... In other words, the information disclosed under the regulations is too broad and general to be used in levering entry by means of legal proceedings.[15]

It is less critical of the Commerce Act, but conclude it suffers from the use of the:

> ... judicial system to resolve complex business issues in a fast-moving industry where time means money even more than in most industries. The Act is designed to promote competition; it does not deal particularly well with the problems that occur in an industry when a critical input, the PSTN, is a natural monopoly. ... Section 36 cannot readily provide for remedies for denial of supply or impose competitive terms and conditions of supply, without requiring the Courts to stand in the shoes of business people and make business decisions. Even with ... lay expertise this is a particularly formidable task, particularly when, as in telecommunications, the issues appearing to require resolution are numerous and widespread. Useful precedents have been established by the Courts in Australia and New Zealand on some aspects of section 36, but its power to establish viable commercial agreements is still untested. This gives rise to uncertainty about its usefulness.[16]

The Commission concludes that the disclosure regulations do not remove any obstacles to competition, and while the Commerce Act may help, its use involves expense, uncertainty and limitation. These findings force the Commission to state the industry is not:

> ... subject to "light-handed" regulation. In the absence of competition the gap is filled by self-regulation. More precisely in relation to many important segments and most critical inputs, Telecom is the de facto regulator. Telecom owns or controls the key factors and, so Telecom makes the rules and other parties in the industry, by and large, play by them.[17]

While these comments appear valid, the Commission quite rightly states that at the time of the reports writing the Act had not been tested over the issue of interconnection. While this is true, the High Court, in *Telecom v Commerce Commission,* has accepted the need for interconnection based on the industry's natural monopoly characteristics. The Court explains:

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14. Cabinet Committee Paper, supra, note 12, pp 5-6. Although that review would not be undertaken it would prejudice any current court case.

15. Commerce Commission, supra, note 7, p 83.

16. Ibid, p 83.

17. Ibid.

> There are known to be large economies of scale and scope, with diseconomies, in particular, in duplicating the local loops. Telecom has built up its network gradually but a potential entrant to network operation is faced with very large investments in transmission facilities and rights of way unless, as in the case of Clear, it can gain access to existing facilities such as the New Zealand Railways fibre link. There is the necessity to obtain interconnection with the PSTN (and international transmission) on terms that are not unduly disadvantageous. The most daunting of these barriers is the dependency upon Telecom's PSTN ... [18]

While this case only commented on the need for interconnection, the issues surrounding interconnection were discussed by the High Court in *Clear Communications v Telecom Corporation and Others*.[19]

This case did not concern the right of interconnection - Telecom had always acknowledged that right - it concerned the terms of connection. Clear alleged that its inability to reach a local interconnection agreement with Telecom was a direct result of Telecom's use of market dominance. In response to this claim the Court had no difficulty in finding that Telecom was in a dominant market position, and was likely to be in that position for some time (in fact Telecom readily admitted that they were in a dominant position for the purposes of the case).[20] Therefore the Court did not consider dominance a central issue, instead it was more concerned that the market be correctly defined because identification would allow a more accurate assessment of whether dominance was or had been "used" for a proscribed "purpose".[21] With this in mind the Court rejected Telecom's definitions that emphasised the distinction between revenues that were regulated and those that were not. Instead the Court accepted one of the two market definitions proposed by Clear viz. that for switched telecommunications services (excluding mobile telephone services) in New Zealand. The Court did not consider Clear's

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18. *Telecom Corporation of NZ Ltd v Commerce Commission and Others,* (1991) 3 NZBLC 102-340, at 102,377. Also see *Telecom Corporation of NZ Ltd v Commerce Commission and Others,* (1992) CA 34/92, judgment of Richardson J, at 9. His honour appears confused with the question of dominance when related to interconnection. He comments: *'But for the interconnection question it might even be argued that if anyone is in a dominant position in the market it is Bell South, that is taking a reasonable time span within which competitive activity will be taking place'.* This conclusion seems most odd.

19. *Clear Communications Limited v Telecom Corporation of New Zealand Ltd and Others,* (1992) CP590/91, Wellington, Elis J and Professor Maureen Brunt.

20. See *Clear Communications Ltd,* (1992) CP590/91, p 60 of the High Court's judgment. This finding reconciles with that of the High Court in *Telecom Corporation,* (1991) 3 NZBLC 102,340 where the members of the Court described why Telecom was dominant. *'Telecom's PSTN is the monopoly gateway to telecommunication subscribers at large ... Barriers to entirely new entry as a network operator, as we have said, are substantial. But entry to segments of the PSTN is not blockaged. ... [However Telecom have incentives] to endeavour to foreclose what might be termed "creeping entry" upon its PSTN domain. We stress that we write off conceivable incentives and available strategies, in short, of the power inherent in a position of dominance. We note that Touche Ross, in its report to the Department of Trade and Industry in 1987, concluded that a monopoly provider of telecommunications such as Telecom possesses both the anti-competitive incentives and the means to act on those incentives'.*

21. Ibid, p 50 and pp 58-59 of the High Court's judgment.

alternative definition of *`markets throughout New Zealand for local switched telecommunication services'* appropriate because:

> ... the source of Telecom's bargaining power is its control of the PSTN and the national numbering system. We need to assess how Telecom has used that power and for what purpose. Further, the issues centring upon the KSO [Kiwi Share Obligation] and the claimed cross-subsidisation, the relevance of network common costs, the implementation of a national numbering scheme, all require us to adopt a New Zealand wide perspective.[22]

Based on this definition the Court was then able to assess the claim of Clear which related to Telecom's demand that access codes be used to reach Clear's network, and that Clear pay Telecom various charges for access to the Telecom network.[23] In other words, the basis of Clear's claim was that Telecom had failed to recognise the ubiquitous nature of Clear's "alternative" network. This led Clear to contend that Telecom had "used" its dominant position to offer terms that it could not offer in a competitive market.[24] Beside the issue of terms, Clear also considered that Telecom had "used" that position to delay negotiations; again Clear believed such delay would not be possible in a competitive market. Based on these assertions, Clear's counsel concluded that Telecom had breached section 36 because its actions had the purpose of restricting, preventing and deterring market entry and operation.[25]

In examining the claims of Clear, the Court discussed the significance of the "use" and "purpose" requirements when determining whether liability existed under section 36. The Court was not prepared to accept the assertion of Clear's counsel that once use has been found *`a breach will follow virtually inevitably'*.[26] Instead, the Court believed the purpose requirement was to limit the effect of the use test:

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22. Ibid, p 59.

23. Ibid, p 9. These two issues related to a number of grounds. Specifically, Clear alleged that Telecom's refusal to allocate it non-discriminatory numbering blocks; its insistence that Clear share its "kiwi-share" obligations; Telecom's intention to pass Clear's termination charges onto its consumers; and its request that Clear pay "infrastructure" costs breached section 36 of the Commerce Act.

24. *Clear Communications Ltd,* CP590/91, p 92 of Clear's opening submissions. Counsel submitted that in a competitive market Telecom could not *'impose a special dialling code, nor to recover a contribution to the opportunities lost by the Kiwi Share; nor to recover a contribution to its infrastructure costs; nor to differentiate a network operator for special costs not applied to other persons connecting up'.*

25. *Clear Communications Ltd,* (1992) CP590/91, p 16 of the High Court's judgment, p 20 of Clear's opening submissions, p 70 of Clear's closing submissions.

26. Ibid, p 53 of the High Court's judgment.

> The sections (36 and 46) are not aimed at mere monopoly charging or terms of dealing: there must be the purpose to damage the enumerated elements of the competitive process. The role of the purpose requirement is to cut back the categories of monopolistic conduct subject to the Act.[27]

Similarly, views were expressed on how the Court should most appropriately construe purpose. These views paralleled those put forward to the Court by Clear's counsel in that they embrace the virtues of an objective rather than subjective construction.[28] The Court explains this stance:

> It is true that Telecom's senior officers and advisers were all well aware of the terms of the Commerce Act and s36 in particular over the relevant period. Their efforts were stated to be to protect Telecom's revenues within the law. In our view that is not enough, and when one is considering the overall purpose or intent of a large corporation, an objective assessment should be made. We agree that account should be taken of subjective views when expressed, but they were usually made for the record or as a caution or precaution.[29]

With these definitional and procedural issues decided, the members of the Court then turned their attention toward the alleged anti-competitive conduct. In reviewing the evidence, the Court was careful to distinguish the conduct of Telecom before and after it gained expert economic advice. Before this time the Court considered that Telecom treated Clear as if it was a customer and not a competing telecommunications company. This treatment led Telecom to not allow Clear *`to be paid for the part of each loop supplied by it and the part of each call carried by it'*.[30] In other words, Telecom treated Clear as if it was a large PABX (private automatic branch exchange) operation. This led Telecom to charge Clear normal business access and calling rates; require that subscribers use a code to access the Clear network; and require that these subscribers pay a charge to access the Clear network.

In the mind of the Court there was no doubt that Clear did not resemble a PABX operation. Instead, the Court believed that Clear was a network competitor which entitled it to be treated as such. With this in mind the members of the Court reached the conclusion that if Telecom continued to use these pricing policies it would breach the purpose requirements of section 36.[31]

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27. Ibid, p 55 of the High Court's judgment.

28. *Clear Communications Ltd,* (1992) CP590/91, pp 49-50 of Clear's closing submissions. Clear's counsel reached this conclusion after considering the content of Telecom's internal documentation which purported to show a commitment to interconnection, a commitment Clear alleges did not exist, although it concedes that a subjective interpretation would probably give the same result.

29. *Clear Communications Ltd,* (1992) CP590/91, p 57 of the High Court's judgment. In reaching this conclusion the Court adopts the analysis of McGechan J in *Union Shipping New Zealand Limited v Port Nelson Limited,* (1990) 2 NZLR 662, at 709. They quote: *'Proof of purpose, in the nature of these cases often will turn upon inferences drawn from actions and circumstances, with a sprinkling of internal memoranda and correspondence. Protestations of inner thoughts which do not reconcile with objective likelihoods are unlikely to carry much weight. In many cases, and this ultimately is one, both objective and subjective standards are met'.*

30. *Clear Communications Ltd,* (1992) CP590/91, p 97 of the High Court's judgment.

31. Ibid, pp 97-99.

Following the receipt of specialist economic advice Telecom's pricing position changed somewhat. Telecom retained economists, Professors Baumol and Willig, who developed a pricing model. The Court outlined Professors Baumol and Willig's recommendations based on the model:

> (1) There should be differential pricing, with prices that vary in their ratio to marginal costs, from one product line to another and from one customer group to another, inversely with elasticity of demand ("Ramsey pricing" ...). (2) For each product or service, price should at least cover marginal cost or average incremental cost. It will be necessary that some products deliver a contribution towards covering the common costs arising from the presence of economies of scale and scope. (3) Where the firm supplies components or intermediate goods to another firm, "... and this process entails some sacrifice of profit by the supplier firm (as when it thereby gives up some capacity that it would other wise have used itself), then the supplier firm must be permitted to price the article in question at a level sufficient to compensate it for the profit it is forced to sacrifice because of its supply to the other firm. Economists refer to the sacrifice of profit unavoidable entailed in an activity as the opportunity cost of that activity. This third pricing principle, then, asserts that the price of any good or service should cover its opportunity cost as will as any other incremental cost entailed in supplying it. This is how goods are always priced in competitive markets, and how they should be priced in any other markets." (4) In the long run, firms should be free to earn a full competitive rate of return, that is total revenues would cover total costs.[32]

The Court identify point 3 as being the most important because its application becomes the basis of Telecom's pricing policy. Specifically, its accepts that the origination or termination of calls using Clear's facilities involves a cost reduction that Telecom should reflect in the price that it charges Clear (price could include portions relating to marginal cost [referred to as average incremental cost (AIC)], common costs [which would include cross-subsidy obligations] and monopoly profits). An example best illustrates the application of the model. If, for example, a Telecom subscriber called a Clear subscriber the direct costs faced by Telecom would fall because Clear would incur the costs associated with terminating the call. Similarly, if a call was made from a Clear to a Telecom subscriber, Telecom would not face the originating costs. Both of these situations would reduce Telecom's costs which they should pass onto Clear as savings.

The reduction in cost would, in turn, allow Clear to profit and, therefore, compete provided it had a cost advantage over Telecom in providing that service (assuming Clear can charge no more than Telecom). Baumol and Willig claim this cost advantage would force Telecom to reduce its price to match Clear's, which would further reduce the price paid by Clear to Telecom. This reduction would reduce the amount Telecom would receive as monopoly profits.[33] The Court summarised the application of the model as follows:

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32. Ibid, pp 67-68.

33. Ibid, pp 70-74.

> 1. In respect of calls from a Telecom customer into the Clear network, Clear can charge Telecom, Telecom's AIC saved by Clear carrying part of the call. 2. In respect of calls from a Clear customer to the Telecom network, Telecom can charge Clear its call rate less Telecom's AIC saved by Clear carrying part of the call. 3. In respect of access to the PSTN Telecom can charge Clear the equivalent of its line rental less Telecom's AIC saved by Clear providing part of the loop. 4. Actual expenses incurred by Telecom in connecting Clear to the PSTN are payable by Clear as agreed.[34]

From these principles, the ability of Clear to compete will depend on whether Telecom charges Clear the same amount as it charges itself for the service offered. Both Professor Baumol, and another Telecom consultant, Professor Kahn, highlighted this principle as one of "competitive parity". In essence, this principle will promote efficient investment - provided the height of price does not adversely affect demand - because no firm is advantaged to the detriment of the other.

When assessing this model the Court was of the opinion that it did not involve Telecom making use of its dominant position.[35] In reaching this conclusion the members of the Court were careful to address the criticisms Clear had levelled at the model. These were summarised to be:

> (1) the demand for an interconnection charge that guarantees to Telecom its revenue foregone; (2) the sharing of any burden imposed upon Telecom by the KSO [Kiwi Share Obligation]; (3) the creation of a barrier to entry through the height of the charge ... that Clear must surmount; (4) the forcing of Clear to compete initially on the basis of its AIC without any recovery of its own common costs; (5) the high transaction costs in resolving disputes over calculation; and (6) the manner in which the Rule enables Telecom initially, at least, to retain any monopoly profits and cover the costs associated with excess capacity or other inefficiencies.[36]

The Court was adamant that Clear should contribute toward Telecom's cross-subsidy obligations and that the payment of price for monopoly profits and other inefficiencies would not have an exclusionary effect nor would it be detrimental to the efficiency of investment.[37] Of greater interest to the Court were the dynamic aspects of the model. Specifically, the members of the Court sought to determine whether Telecom would have the incentive to reduce price - and, therefore, its opportunity cost - to match Clear's lower AIC. Counsel for Clear alleged that Telecom would not match Clear's lower price. Failure to reduce price would, in turn, require Clear to pay more of Telecom's overheads as it became more successful. The Court, however, was not convinced by this argument for they preferred to take a longer rather

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34. Ibid, p 74.

35. Ibid, pp 94-95.

36. Ibid, p 75.

37. Ibid, pp 79-90.

than short run view. In taking this view the Court believed that whatever Telecom did in the short run, it could not hold price in the long run because of its loss of custom. The Court further believed that Clear's short run losses would not limit entry because of underwriting by its large and "wealthy" overseas parents.[38]

Beside dynamic arguments, the Court also addressed the issue of administrative cost and how the burden of this limits the effectiveness of the regime.[39] Clear were of the opinion that there were great difficulties estimating average incremental costs and that changing technology would compound this problem in the future. The Court agreed that potential for difficulty existed, but this potential would be minimised with an appropriately designed *`administrative mechanism'*. Although not providing specific detail, the Court offered some guidance on what this mechanism might involve:

> Regular reviews would be necessary to adjust for shifting prices and costs. It would be important to design an arms length mechanism that would minimise the possibility of collusion. This is another point in which some regulatory presence may be needed. It would be important for the reviews not to take place at too frequent intervals, for that would reveal sensitive markets information; the adjustments should be back-dated, with interest covering the time-value of money.[40]

With the issue of cost determined, the Court believed the application of the Baumol-Willig model would indirectly solve the issues surrounding Telecom's requirement for coded access. In reviewing evidence the members of the Court considered non-discriminatory access to the numbering plan vital. It was their belief that non-discrimination prevented Telecom from using "access codes". However, they were also of the belief that Telecom wished to use access codes not only to differentiate a Clear product from a Telecom product, but to recover revenue lost when a Clear subscriber called a residential Telecom subscriber. For this reason Telecom developed an access code that signified that a charge was being made.[41]

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38. Ibid, pp 90-93.

39. Ibid, p 93. The administrative burden of the Baumol-Willig model was a major reason why Clear proposed a simple settlement regime which would be in the form of a net payment to the party with the greatest call imbalance. The Court rejected this regime because it did not recognise the greater infrastructure costs of Telecom, nor did it make a contribution toward the Kiwi Share.

40. Ibid, p 93.

41. Ibid, pp 63-64. For example, the Court gave the example of 025 being the access code for the charged cellular service. It indicated that Telecom's requirement that Clear use 023 was analogous because it signified that the consumer was being charged for the call. While such a charge would not be significant for business callers, it would be so for residential who face free local calling on the Telecom network. A charge would therefore reduce their incentive to call a Clear subscriber and so discourage businesses from connecting to Clear.

With the proposed model, recovery failed to be an issue because Telecom would only pay Clear the portion saved from Clear handling part of the call. For this reason the Court was of the opinion that *`there could be no justification for requiring an access code let alone one which commences with "0"'*. Nevertheless, the Court was prepared to accept - albeit reluctantly - Telecom's call for product differentiation by the use of a "non obtrusive dial tone".[42]

With these issues in mind the Court then considered whether Telecom had breached section 36. Clearly its acceptance of the Baumol-Willig model left only Telecom's conduct prior to taking advice from its economic consultants open for ruling. The members of the Court were critical of Telecom's prior conduct. In particular they highlighted Telecom's policy of not recognising Clear as a network competitor, merely just another customer:

> Perhaps it is easy to say so now, but it is hard to accept that Telecom did not realise early in the piece that a competitive environment must involve Telecom accepting certain of its sunk costs (eg. for some existing loops) becoming irrecoverable and the competitor entitled to be paid for the services it provided Telecom just as Telecom would be entitled to be paid for services it provided to the competitor.[43]

The Court concluded that Telecom was using its dominant position for an anti-competitive purpose, but was not prepared to accept delay as another cause of action by Clear. It reached this conclusion after realising that both parties were negotiating in the fog, and that even if Telecom had adopted the Baumol-Willig model initially, it would still have probably been rejected by Clear who would have sought maximum commercial advantage. For this reason it ruled that Clear had not suffered any loss. The Court was, however, less conciliatory toward Telecom's refusal to connect Clear as a DDI customer so that it could fulfil its contractual obligations to the Justice Department. It ruled that Clear should receive compensation for any loss.[44]

When discussing the issue of remedies and costs the Court referred the matter of settlement back to the parties. At this stage the Court did not consider it appropriate that damage or injunctive relief be granted, nor did it wish to award costs to any of the parties. It reached this conclusion using the following logic:

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42. Ibid, pp 64-65.

43. Ibid, p 97.

44. Ibid, pp 98-100.

> The parties are in ongoing negotiations and conflict. It is time these settled down and we hope we have indicated a framework that will promote this. While we are prepared to award damages, we would like to suggest that these could well be absorbed by the negotiated terms of interconnection. We would hope too that injunctive relief to support our conclusions will be unnecessary. Because of the novelty of the situation and the polarisation of the parties up until trial, when Telecom agreed to accept the advice of its economic experts, we do not propose to award costs to either party in respect of the proceedings to date.[45]

Certainly this judgment canvased the issues surrounding interconnection. It addressed concerns relating to cross-subsidy, the allocation of numbering blocks, issues surrounding access codes and finally who should bear the cost of interconnection both at the access and usage levels. The judgment's is appealing. It provides a framework so that negotiation can proceed after recognising the complexities of the industry. In this way the Court adopts a light handed policy solution and by doing so matches its ruling with Government policy. The framework also seeks to promote only efficient entry because a competitor will only enter a market when faced with a cost advantage when compared to the incumbent.

While there are benefits from this approach, it appears only to be an initial step. By leaving the terms of resolution to the parties the potential for future dispute exists. However, this potential must be weighed against the Court's ability to provide appropriate injunctive and damage relief.[46] For this reason I believe this approach worth trying; however, my remaining concern would be with the adequacy of the model. Although economically correct, I believe Clear's reservations over the administrative burden of implementation along with the great potential for dispute will create difficulties. Similarly, the ability to determine an appropriate average incremental cost (AIC) will be the subject of much dispute. I mention this because of the problems associated with cost allocation (I do not wish to enter that debate again, see chapter 6 section 6.4 for more detail) - suffice to say that determining what is a traceable and what is a common cost could create tension, especially since traceable cost (cost that varies with output [AIC]) provides the margin by which Clear must profit.

Because of these doubts, the Government could still have a role in the regulatory process. This role would see it provide a regulatory framework above that set by the Commerce Act. This framework, along with prior judgments of the Court, will provide a lens through which

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45. Ibid, p 101.

46. For discussion of the problems encountered framing appropriate injunctive relief see Pengilley W., 'Queensland Wire and its Progeny Decisions: How Competent are the Courts to Determine Supply Prices and Trading Conditions?,' *Western Australian Law Review*, vol 21, 1991, pp 225-257. Also see Wright R., 'Injunctive Relief in Cases of Refusal to Supply,' *Australian Business Law Review*, vol 19, 1991, pp 65-97.

negotiation can proceed. This lens, in turn, will reduce the future use of the Court. Indeed the beginnings of such a framework already exist in New Zealand. In 1991 the Ministry of Commerce reviewed telecommunications numbering to determine whether Telecom's ownership hindered the development of competition. In this regard the Ministry called for industry submissions. Telecom was adamant in its submission that other operators should develop and administer their own plans; Clear, BellSouth, and the Telecommunication Users Association of New Zealand (TUANZ) did not share this view. These parties claimed integrated numbering would best promote competition within the industry.[47]

These organisations also felt that coded access to their networks place them at a competitive disadvantage because if a subscriber did not dial that code, the call would revert to Telecom's network. Finally, their submissions commented on the desirability of number portability, both within and between networks, so subscribers could easily switch between operators. The Ministry, after critically reviewing these submissions, concluded that a co-ordinated approach to industry numbering, without the use of codes, would most likely promote competition. Portability was also seen as a desirable future progression.[48]

After the release of this report BellSouth quickly resolved a numbering problem it was having with Telecom.[49] However, despite a closening in position, both parties could not reach full agreement because there was still difficulty over how BS would charge calls made to its cellular network from a Telecom land subscriber. Because of continued dispute both parties agreed that interconnection would occur from 1 January 1993 and that an independent arbitrator would settle any outstanding issues.[50]

Because of the delay in settlement, a regulatory presence to expedite this process could be required. A regulatory presence could also be required to police the terms of connection because although the courts can adequately determine a breach of law, they may not be so able to provide a remedy for that breach both now and in the future. For this reason the use of regulatory bodies by overseas countries will be the subject of the next section.

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47. Commerce Commission, supra, note 7, pp 14-22.

48. Ministry of Commerce, *Telecommunications Numbering in New Zealand,* first report, 30 September 1991.

49. Cabinet Committee Paper, supra, note 12, pp 10-11.

50. Commerce Commission, note 7, pp 66-67. This concession resulted from Telecom's desire to obtain the AMPS A frequency for its cellular arm; *Telecom,* (1991) 3 NZBLC.

10.4 The Approach to Regulation in Other Countries

The regulatory approach of overseas countries to interconnection differs considerably from New Zealand's. Although negotiation still plays a part, connection terms are primarily established by a regulatory body, which oversees industry development. The policy makers in these countries favour these bodies because they hasten the negotiating process and consequently the transition from a monopoly to competitive environment.

Regulatory bodies will not only facilitate entry. Generally they also protect the consumer because the countries in which they operate have not liberalised their telecommunications markets to the same degree as New Zealand. A regulatory body may not have been used to rapidly negotiate agreements, but to prevent consumer exploitation. Therefore inter-country comparisons will have a colouring based on the extent of telecommunications liberalisation.

With these thoughts in mind I will discuss the regulatory process used in Britain, Australia and the United States to achieve telecommunications interconnection. This discussion will provide the basis for a comparison with the New Zealand experience.

Britain

Between 1980 and 1982, the British Government rearranged its telecommunications industry by separating British Telecom (BT) from the Post Office's postal arm. Partial deregulation followed with the licensing of Mercury Communications Ltd (MCL) to provide a competing telecommunications network.[51] MCL initially interconnected with a voluntary agreement; however, problems with this agreement, and the Government's intention to sell 51 per cent of BT, saw the Government review this policy. The outcome of this review was greater regulatory control with the drafting of the Telecommunications Act 1984 and the formation of the Office of Telecommunications (OFTEL) to administer that Act.

One of OFTEL's objectives is to maintain and promote effective competition. To this end it renegotiated BT's and MCL's licences.[52] Clause 13 of BT's licence required network operators to agree on their own terms for interconnection, but OFTEL would intervene if these

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51. Cabinet Committee Paper, supra, note 12, pp 18-19.

52. Ibid.

parties could not reach agreement. After nine months of unsuccessful negotiation, Mercury requested OFTEL's help to resolve disputes. OFTEL resolved this issue by:

> ... requir[ing] BT to carry MCL traffic to and from designated "points of interconnection", with charges for this service determined by Oftel. Oftel also set out what charging arrangements, infrastructure, access arrangements, and billing procedures were to be implemented.[53]

British policy makers reviewed the issue of interconnection because of the proposed liberalisation of network operations in 1991. Up until that date the Government guaranteed MCL would be the only competitor to BT. The Department of Trade and Industry (DTI) expressed concern that complete liberalisation would place considerable pressure on OFTEL to resolve interconnection disputes. DTI suggested OFTEL consider streamlining their approach by, for example, *`issuing general guidance to the parties or prescribing standard terms, with only exceptional cases capable of being referred for individual determination'*.[54]

Irrespective of the current or eventual role OFTEL assumes in resolving interconnect disputes, its ability to resolve a dispute quickly benefits entry. For example, OFTEL has considered whether competitors should contribute to BT's cross-subsidy obligations. It has also commented on issues relating to the national numbering plan and the desirability of equal or near equal access for interconnected operators.[55]

Australia

In Australia the reform of telecommunications has been similar to Britain's (although it occurred much later and did not include the privatisation of the dominant carrier).[56] The basis of reform was that Telecom Australia would merge with the Overseas Telecommunications Commission to form the Australian and Overseas Telecommunications Corporation (AOTC), *`and that the Government-owned satellite company AUSSAT would be sold along with a licence to provide a competing switched telephone service'*.[57] To regulate the industry the Government

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53. Ibid.

54. Department of Trade and Industry, *Competition and Choice: Telecommunications Policy for the 1990s: A Consultative Document,* HMSO, London, November 1990.

55. Cabinet Committee Paper, supra, note 12, pp 18-19. Also ibid, pp 55-56.

56. Evans G. hon. sen., *Australian Telecommunications Services: A New Framework,* Minister for Transport and Communications, Australian Government Publishing Service, Canberra, 25 May 1988. Also Beazley K. MP, *Micro-Economic Reform - Telecommunications,* Minister for Transport and Communications, Canberra, 8 November 1990.

57. Cabinet Committee Paper, supra, note 12, pp 19-20.

formed AUSTEL to, amongst other things, promote competition, licence network operators and take control of the country's numbering plan from Telecom.[58] AUSTEL was also given wide powers of enforcement.[59]

A vital aspect of reform was the interconnection of alternative telephone companies. To ensure this the Telecommunications Act (sections 136(1)&(2)) gave each carrier the right to interconnect with another so as *'to promote the long-term interests of consumers of telecommunications services'*. Principally competitors were to agree on terms and conditions (section 137(2)(b)), but failing agreement a party can ask the regulatory body AUSTEL to intervene (section 154). Following the negotiation of an agreement, with or without intervention, these parties can then ask AUSTEL to register their agreement. Registration has the advantage of exempting it from action under part four of the Trade Practices Act (section 236).[60] AUSTEL can refuse registration if the agreement does not meet the requirements of section 137 or does not fall within that section's bounds (section 146(3)).[61]

As well as intervention, AUSTEL has taken a pro-active stance to promote competition. It has done this by examining AOTC's cost structures so that it can set "fair" interconnection charges based on the principle of directly attributable incremental costs.[62] It has also reported on the desirability of equal access.[63] Apart from AUSTEL, there has been discussion on whether entrants should pay a portion of AOTC's community service obligations. This discussion led to the requirement that all carriers pay their share of this obligation.[64] This

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58. Ministry of Commerce, supra, note 48, p 65.

59. See Taperell G., 'Misuse of Market Power in Telecommunications: The Legislative Safeguards,' in Corones S.G. ed., *Competition Policy in Telecommunications and Aviation,* The Federation Press, Sydney, 1992, pp 179-197, at 184-85.

60. Effectively the option of AUSTEL registering interconnect agreements has eliminated section 46 of the TPA (similar to section 36 in New Zealand) as a method of resolving interconnection disputes. Similarly, section 45 (section 27 New Zealand) has also been eliminated along with section 49 which concerns price discrimination (no equivalent New Zealand section). However, section 49 only prevents discrimination in relation to goods and not services. Therefore its application to telecommunications is uncertain. See *ASX Operations Pty Ltd & Anor v Pont Data Australia Pty Ltd,* (1991) ATPR 41-069, where the Full Federal Court did not consider an electronic signal to be a "good".

61. For example, if both parties have not agreed on the terms or if the agreement does not relate to the carriage of service. For overview see Taperell, supra, note 59, at 182.

62. See AUSTEL, *Study of Arrangements and Charges for Interconnection and Equal Access,* Parts I and II, 14 June 1991. See Rothwell, supra, note 3, p 239.

63. Ibid.

64. Cabinet Committee Paper, supra, note 12, pp 19-20. Also Rothwell, supra, note 3, pp 241-42. He discusses the *Telecommunication Acts'* requirement that each carrier pay for their share of this obligation. AUSTEL has the role of administering collection and allocation.

approach to interconnection has developed in a similar manner to Britain's in that a regulator will resolve inter-party disputes, although AUSTEL takes a more pro-active stance in that it will establish some terms before required by industry.

The United States

The American (US) approach to interconnection has been different to that of either Britain, Australia, or New Zealand. In that country interconnection has a historical presence because at the turn of the century there were many competing exchanges.[65] However, the extent of competition declined with the American Telephone and Telegraph Company's (AT&T) active acquisition of independent operators. This programme saw AT&T become the dominant carrier, a position that led to its regulatory control by both individual states and congress.

Initially, the Interstate Commerce Commission (ICC) controlled AT&T, but its power (which included the ability to compel interconnection) transferred to the Federal Communications Commission (FCC) along with additional controls in 1934. This Commission was instrumental in allowing AT&T to maintain its monopoly control for much of the century. In 1959 this position changed with the FCC authorising indirect forms of competition in the private point-to-point microwave communication systems market.[66] In 1969 the FCC approved Microwave Communications' (MCI) application to operate a common carrier private-line microwave system between Chicago and St. Louis, a service that required interconnection. In 1975 MCI extended this service - without FCC approval - to the ordinary toll market. However, although initially contested, the Supreme Court allowed that extension.[67]

Despite approval to operate a private-line microwave service, MCI had difficulty in obtaining the desired and technically appropriate points of interconnect.[68] Consequently MCI filed an antitrust suit in March of 1974 alleging, under section 2 of the Sherman Act, that

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65. See Bornholz R., and Evans D.S. ed., 'The Early History of Competition in the Telephone Industry,' in *Breaking Up Bell: Essays on Industrial Organization and Regulation,* North-Holland, New York, 1983, pp 7-40 at 25-28.

66. Brock W.A., and Evans D.S. ed., 'Predation: A Critique of the Government's Case in *US v. AT&T,*' in *Breaking Up Bell: Essays on Industrial Organisation and Regulation,* North-Holland, New York, 1983, pp 42-43.

67. See *FCC Decision,* FCC Docket 20640, 30 June 1976, 60 FCC 2d 25; and *Microwave Communications v Federal Communications Commission,* (1977) No 75-1635, 561 F2d 365 (Dc Cir), *cert denied,* (1978) 434 US 1040. Also, ibid, pp 42-43.

68. See *MCI Communications v American Telephone and Telegraph Company,* (1983) 708 F 2d 1081, at 1132. MCI assert that *'the entire interconnection procedure required by AT&T was unreasonable because the physical interconnections utilized materials inadequate for the volume of business MCI was doing and because it involved unduly complex and ineffective installation and maintenance procedures'.* Also at 1150-53.

AT&T had engaged in activity designed to monopolise the toll market. The Seventh Circuit Court of Appeals found, some nine years after filing, that AT&T had breached this section because they denied access to a facility "essential" for competitive activity in other markets.[69] The Court explains:

> Evidence that telephone company had complete control over local distribution facilities which a competitor required for its long-distance service offerings, that interconnections were essential for the competitor to offer its services, that the competitor could not duplicate the local facilities, since they are generally regarded as a natural monopoly and are regulated as such, and that the interconnections could have been provided sustained imposition of liability on telephone company for refusal to deal with its competitor under the essential-facilities doctrine.[70]

At the time MCI was having difficulty gaining points of interconnect, the US Department of Justice (DOJ) showed increasing concern over AT&T's response to competitive entry. To alleviate this fear the DOJ, in 1974, filed an antitrust suit against AT&T alleging:

> ... that during the past three decades, and particularly since the late 1960's AT&T has engaged in a comprehensive course of conduct to wilfully maintain its monopoly in the intercity telecommunications services market. As each new competitor has appeared, AT&T has carried the battle against competition outside the regulatory area and into the market place where it has exploited its enormous monopoly power to maintain its monopoly position in the market. Broadly, the major features to AT&T's exclusionary conduct in the intercity services market have been the manipulation of the terms and conditions under which competitors are permitted to interconnect with AT&T's existing services and facilities, including those of the local exchange operators, and the repricing of AT&T's own intercity services in competition with the new entrants.[71]

To remedy this situation the DOJ asked the Court to divest AT&T's toll from local operations. Such separation, they claimed, would provide less incentive for a local operator to discriminate between alternative providers of toll service.[72]

In 1982 the DOJ were successful in their quest for separation. The decision (Modified Final Judgment (MFJ)) reorganised AT&T's local operations into 7 holding companies (ROCs), while AT&T, and several other operators, competed in the toll market.[73] The 7 ROCs were prevented, amongst other things, from offering toll service and given responsibility for the administration of the nation's numbering plan. That responsibility included a requirement

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69. Ibid, at 1132-33. To be essential the Court outlines four requirements: the monopolist must control the facility; it cannot be economically or practically replicated; there has been a denial of use to a competitor, and it is feasible to provide the facility to a competitor.

70. Ibid, at 1084.

71. U.S. Department of Justice, *Plaintiff's Memorandum in Opposition to Defendant's Motion for Involuntary Dismissal Under Rule 41(b)*, in *US v AT&T*, August 16, 1981.

72. Brock et al., supra, note 66, p 45.

73. *United States v American Telephone and Telegraph Company*, (1982) 552 F Supp 131 DDC, *aff'd mem. sub. nom. Maryland v United States*, (1983) 460 US 1001.

to work toward equal access for all toll competitors. This settlement allowed the FCC to reduce its regulatory role; however, it continues to set interconnect charges. The FCC retains this presence because although local operators have an incentive to provide non discriminatory access, the terms of access may still incorporate a component relating to monopoly price. While reducing the toll to local cross-subsidy has been a concern, the FCC still administers that subsidy when setting interconnection price.[74]

Regulatory Body Commentary

These countries' approaches to interconnection differ markedly from New Zealand's in that they all, to some degree, use a regulator to determine the terms of interconnection. Using a regulator has the advantage that they will form agreements more quickly. Nevertheless, speed may not always be a virtue.

A regulatory body must spend a considerable amount of time and funds to reach a decision. While this expenditure may be acceptable if the regulator reaches an efficient decision, often this will not occur because they will have insufficient knowledge to make such a finding. However, even if the regulator did have the information required, that would not end the matter because the regulated firm - the holder of that information - will provide the regulator with information that will only accentuate these inefficiencies.[75] So even if the regulator could obtain the information he/she requires, uncertainty will still exist over the quality of that information.

Apart from "unintentional" error, inefficiencies may also stem from another source. For example, the regulator will perpetuate inefficiencies if he/she must balance conflicting objectives. Similarly, inefficiencies might occur if the regulator becomes caught by a participant in the industry to provide private over public benefits. If this occurs a determination will be inefficient for it will benefit one party at the expense of another.

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74. Hunt L., and Lynk E., 'Competition in UK Telecommunications: Restructure BT?,' *Fiscal Studies,* vol 12(3), August 1991, p 78. Also see Whittaker W., *Regulate Competition American Style: Good or Bad For New Zealand,* PTC Conference on "Opportunities for the Economy", Auckland, 16 October 1992. Whittaker comments on the discriminatory level of access charge between AT&T and its competitors: *'The inequities in access costs gave the OCCs [(other common carriers)] a tremendous competitive advantage even though in the early years their interexchange costs exceeded AT&Ts interexchange costs on a per minute of use basis'.*

75. Beesley M.E., and Laidlaw B., *'The British Telecom/Mercury Interconnect Determination,'* Spicer and Pegler Associates, London, 1986. Paraphrased by Gist P., *The Role of Oftel,* London Business School, May 1988, p 41. The authors suggest this possibility when evaluating *'the DGT's [Director General of Telecommunications] determination of the prices which Mercury would pay to BT and their relationship with BT's own prevailing tariffs had created profit margins for Mercury. These were particularly high for peak period trunk calls'.*

In spite of inefficiency issues, I have, until now, implicitly assumed that when a regulator determines an agreement, that determination will be the end of the matter. Often, however, this will not be the case because although regulators can resolve issues quickly, they cannot address every issue associated with interconnection, nor determine those issues with reference to the environment faced by those parties. In this regard a party may dispute a finding or, if that is not possible, respond to that finding in a way that limits its effect. With reference to the regulator dominated environment in Britain, Beesley and Laidlaw comment upon interconnection agreements:

> ... the Determination left many issues in doubt and sufficient remaining disabilities on Mercury to constrain the pace of its development as a rival to BT. ... In terms of the quality of interconnection, the principal difficulties have arisen over the need to connect Mercury's digital network to BT's still largely analogue network, and BT's tactics.[76]

These problems may be partly due to the British regulatory licensing system. That system directs the regulator's attention to the main areas of anticompetitive potential. It does not, however, consider other areas of less apparent concern (although when accumulated they can be as equally serious).[77] This will be the case with any regulator because scarce resources will require the direction of funds to the areas of greatest perceived need.

Besides concerns relating to the dominant carrier, parties seeking interconnection may use the regulator when the situation does not warrant it. They do this because they do not bear the costs of their action. In this regard intervention could occur when a dominant position was not used. This could result in inefficiencies.

10.5 Regulatory Recommendations

The 1988 liberalisation of telecommunications had the objective of creating *`efficient and fair markets in telecommunication goods and services'* in New Zealand.[78] To ensure this, interconnection was a key factor that would allow competition where natural monopoly features did not exist. This would promote the transition from monopoly. Interconnection would promote efficiency because it would limit the extent of replication in areas where competition could not occur. However, to achieve this objective the incumbent must first grant connection, then ensure that its terms were fair and reasonable. This will ensure efficient investment.

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76. Beesley et al., supra, note 5, pp 27-28.

77. Gist, supra, note 75, p 31.

78. Ministry of Commerce, *Telecommunications Information Leaflet No 1: New Zealand Regulatory Environment for Telecommunications*, 28 November 1991, p 1.

Obviously connection will cause the incumbent to lose revenue. Therefore it have little incentive to provide connection or, for that matter, terms that maximise efficiency. Consequently other forms of control must achieve this end. When determining the type of control the Government must consider whether to separate or regulate the organisation. Hunt and Lynk comment on the value of separation as opposed to regulation:

> ... much of BT's potential power to pursue anti-competitive policies arises from the integrated nature of its operations. ... BT's licence contains a considerable list of prohibited anti-competitive practices, indicating its potential power, and it is clear that OFTEL carries a heavy responsibility in its control. ... Despite OFTEL's enthusiasm for increasing competitive pressures within the industry it has increasingly become involved in complex regulatory issues ... This is one reason why it has been suggested that, should regulation fail to ensure productive and allocative efficiency within the industry, restructuring may be an alternative solution.[79]

Total separation has the advantage of limiting the incentive for the monopolist to discriminate. However, as with horizontal separation, the advancing nature of technology will limit the benefit and maximise the cost of separation. For this reason the Government should direct Telecom to form profit centres, with the instruction to compete on an arm's length basis with anybody. Telecom should form these types of centres instead of being forced to use more traditional forms of separation because the advancing technology makes it difficult to distinguish between monopoly and competitive service. Such separation will have the potential to maximise benefit while minimising cost. But to ensure the validity of the allocation process the Government should threaten to separate. To increase the credibility of this threat it should require that these centres be independently audited and that they disclose cost information.

Despite this separation process, ownership still gives the monopolist the incentive to discriminate. Therefore the Government should select a regulatory tool to limit this potential. Such selection has been the subject of much debate. Essentially, the choice of tool involves a cost/benefit trade-off, which has the objective of maximising net efficiencies. In that regard the New Zealand Government has selected "light-handed" regulation because this provides the maximum incentive for benefits while minimising cost.

Not all agree with this selection. The Commerce Commission comments that the disclosure regulations do not provide information of the sort or detail required to meet its intended purpose, and that reliance on the Commerce Act encourages prolonged negotiation and the use of the Court to delay settlement.[80] Similarly, the Australian Government does not

79. Hunt et al., supra, note 74, p 83.

80. Commerce Commission, supra, note 7. Also see Martin, supra, note 12, and Ratner supra, note 12.

consider a court based framework appropriate. It argues that it would not provide the certainty required for industry development:

> The Government has considered the role of courts and other judicial tribunals in telecommunications regulation. It has concluded that relying solely on courts and judicial processes would be inappropriate for first-level regulatory administration, directed at providing an environment of certainty and confidence for decision making in a dynamic changing industry. These considerations have led to the Government's decision to formalise future regulatory arrangements for telecommunications within a single specialised authority, ... [81]

Moreover, the Government may select a regulator because the judiciary, while experts in law, may not cope with the complexities of industry regulation. Pengilley explains:

> In many ways judicial regulation can be more counter productive than the more familiar bureaucratic regulation. Regulatory bureaucrats normally have technical qualifications in, and constant familiarity with, the industry they are called upon to regulate. They have investigatory and back up staff. The judge lacks both these attributes.[82]

Finally, the British Government justifies its regulator because of his/her ability to expedite the settlement process. For this reason it sees regulatory "direction" as desirable:

> The Government's general preference is to limit the role of the regulator in commercial issues. However, in view of the importance of interconnection, the Government wishes to ensure that the necessary arrangements have been made to prevent it from being used by an incumbent operator as a way of frustrating competition.[83]

While these points are valid, the reasons for their validity relate not so much to the judicial process, but to what governments expect from that process. For example, Holmes suggests that the need for a regulator relates to:

> The range of national and social goals for telecommunications is such that direct Government specification and balancing is needed, and these matters are inappropriate for general competition law, or for administration by generalist agencies.[84]

I agree; neither the courts, or generalist agencies, can be expected to perform these balancing tasks. However, I suggest that the need for a regulator is a function of these tasks. Therefore if these tasks were taken away, so would the need for a regulator. Indeed this is the case in New Zealand. The *Telecommunications Act* 1987 does not require the balancing of different

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81. Evans, supra, note 56, p 125.

82. Pengilley W., 'Deregulation or Re-regulation,' in Corones S.G. ed., *Competition Policy in Telecommunications and Aviation*, The Federation Press, Sydney, 1992, pp 111-178, at 114.

83. Department of Trade and Industry, supra, note 54.

84. Holmes J., 'The Telecommunications Act 1991 and its Meaning for Consumers and Competition,' in Corones S.G. ed., *Competition Policy in Telecommunications and Aviation*, The Federation Press, Sydney, 1992, pp 217-232, at p 226.

objectives - the only stated goal of government is efficiency.[85] Therefore the need for an industry specific regulator is severely blunted.

Besides a balancing task, Holmes also suggests that the characteristics of the industry may require a regulator. He explains:

> The answer is to be found in the nature of the industry, characterised by heavily entrenched, vertically integrated traditional monopolists, protected by substantial barriers to market entry, and providing infrastructural services so important to the whole economy and society.[86]

Again I do not believe features lead to the conclusion that there should be an industry specific regulator. Antitrust courts for most of this century have had to deal with the issues of vertical integration, barriers to entry and products characterised by inelastic demand. For example, the issues of vertical integration were discussed by Mason CJ and Wilson J in *Queensland Wire Industries*.[87] Similarly, barriers to entry have been the subject of most monopolisation/dominance cases, because the only way to determine whether a party has market power is to determine the size of entry barriers.[88] Finally, the courts have discussed the issues surrounding inelastic demand.[89] Therefore the telecommunications industry may not require a specific regulator because these characteristics make it no different from any other product.

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85. Ministry of Commerce, supra, note 78, p 1.

86. Holmes, supra, note 84, p 226.

87. *Queensland Wire Industries Pty Ltd v The Broken Hill Proprietary Company Limited & Anor,* (1989) ATPR 40-925, at 50,009-10. Their Honours comment on the relationship of vertical integration to market power: *'It is true enough that vertical integration sometimes accompanies a substantial degree of market power, but its presence does not necessarily mean that a substantial degree of power exists'.* Also see *United Brands Co v Commission of the European Communities,* (1978) 1 CMLR 429 at 278-79 and 487-488. The members of the Court indicate the relevance of vertical integration to market power. Finally, see the merger case *Brown Shoe Co v United States,* (1962) 370 US 29. In this case the Court discussed the issue of vertical integration extensively.

88. See *Queensland Wire,* (1989) ATPR 40-925, at 50,008-09. Their Honours comment: *'Market Power can be defined as the ability of a firm to raise prices above the supply cost without rivals taking away customers in due time, ...'.* They - in quoting from Scherer, *Industrial Market Structure and Economic Performance,* second edition, p 11 - state: *'significant entry barriers are the sine qua non of monopoly and oligopoly, for ... sellers have little or no enduring power over price when entry barriers are nonexistent'.* Then they go further by commenting *'Barriers to entry may be legal barriers - patent rights, exclusive government licences and tariffs for example. Barriers to entry may also be a result of large "economies of scale"'.* Also see *Queensland Co-operative Milling Association Ltd v Defiance Holding Ltd,* (1976) ATPR 40-012, at 17,246. The Court comments on the importance of barriers to entry when related to the ability of others to compete. Its members state: *'the most important [element of market structure is the height of barriers to entry], the condition of entry is the ease with which firms may enter which establishes the possibilities of market concentration over time; and it is the threat of the entry of a new firm or a new plant into a market which operates as the ultimate regulator of competitive conduct'.*

89. Similarly, inelastic demand is but one factor that the Courts consider when defining market and dominance. See above cases.

When related to the issue of judicial capability the New Zealand Commerce Act, unlike the Australian Trade Practices Act, recognises that at times the judiciary may have insufficient knowledge to preside over what are essentially commercial matters. For this reason sections 77 and 78 of the Commerce Act allow lay members to sit with the judiciary so the High Court's decisions can be more economically and commercially orientated. Again this ability reduces the need for a regulator.

Finally, reliance on the Court depends on an emerging body of case law. Obviously because of the sparse nature of "essential facility" case law in New Zealand, negotiating parties have little indication as to how the courts will react to alleged breaches of a dominant position. When forming judgment the Court must answer two questions. First, whether the plaintiff should interconnect with the monopolist's network; then the terms on which interconnection should proceed. Obviously both of these issues are important. When related to telecommunications the High Court, in *Telecom v Commerce Commission,* has already agreed on the first,[90] while more recently the High Court in *Clear Communications v Telecom* discussed the issue of terms.[91] In the latter case the Court avoided providing injuctive relief by indicating to the parties what it thought reasonable. It did, however, threaten to intervene should its advice not be followed. In other words, the Court provided a framework from which the parties could continue negotiation.[92]

For this reason uncertainty remains over how a Court will frame injunctive or damage relief. Certainly, the Court should not involve itself with the issue of fixing price, because this will give the Court a continuing supervisory role.[93] In my opinion the judgment quite rightly set a framework by which parties could continue to negotiate.

However, even if the courts cannot cope with the complexities of the industry, regulatory bodies are not the immediate solution to the resolution of industry problems. This is because they have their own unique problems which limit their effectiveness; they also consume a considerable amount of funds and fail to pass this cost onto the negotiating parties. However, I believe the Government could take a more active role in the interconnection process by

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90. See *Telecom Corporation,* (1991) 3 NZBLC, at 102,377. See quotation referenced by footnote 18.

91. *Clear Communications Ltd,* (1992) CP590/91.

92. *Clear Communications Ltd,* (1992) CP590/91, at 101.

93. Wright, supra, note 46, also Pengilley, supra, note 46.

substantially increasing the breadth and content of its policy statements. I base this opinion on both local and international experience, which suggests there are issues that continually reoccur with interconnect resolutions. These areas include: a) numbering/directory access; b) points of interconnection; c) access codes; d) interconnection fees; and e) cross-subsidy (kiwi share) obligations.[94]

Given these factors, it is possible for the Government to expand its policy statements, or for an industry body to resolve these issues (currently many argue Telecom fulfil this role).[95] Such discussion would provide the industry with greater certainty about the threat of intervention. This, in turn, would help direct parties toward negotiated settlement. Such clarity will increase with parties being able to assess the reaction and remedies of the Court to interconnect issues.

The value of such discussion is evident, with Government organisations addressing some of these issues. During 1991 the Ministry of Commerce issued a report on Telecommunications Numbering, which suggested an integrated industry approach to numbering. It also suggested the desirability of number portability and non-coded access.[96] This document, although not binding on the industry, was instrumental in BellSouth and Telecom reaching agreement over outstanding numbering issues. Therefore similar reviews could have similar success if conducted in other areas. This process should draw precedent from overseas.[97]

Of course these resolutions should only guide - not determine - negotiations; nor should they prevent parties from introducing other factors for consideration. The important point is that they provide a starting point for negotiation that will enable other matters to be discussed more quickly - an action that will speed negotiation. Nevertheless, if settlement still eludes parties the Commerce Act could seal agreement, although the parties could resolve to seal

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94. Commerce Commission, supra, note 7. As an aside, the cross-subsidy/Kiwi Share obligations would not be an issue if the recommendations of chapter 9 were followed.

95. Ratner, supra, note 12.

96. Ministry of Commerce, supra, note 48.

97. For example, see Ameritech/Bell Atlantic's submissions to AUSTEL; they comment: *'A single numbering plan is fundamental to the establishment of vigorous competition. Carrier specific numbering should be avoided to reduce customer confusion and increase transparency... any requirement to dial additional digits for access to the second carrier network would create an extraordinary advantage for the dominant carrier'.*

agreement by using binding arbitration (the BellSouth/Telecom approach),[98] or mediation and alternative dispute resolution.[99]

10.6 Conclusion

To achieve New Zealand's objective of an efficient telecommunications industry, fair and reasonable interconnection will ensure that facilities with natural monopoly characteristics are not replicated. A regulatory structure must ensure that industry dominance does not affect this goal. Such a structure has been the subject of considerable debate.

Many overseas countries have used regulatory bodies to determine these terms. New Zealand has not used this approach, but has instead relied on negotiation and general competition law. With this regime Clear Communications has grown to a larger extent than any other entrant in similarly liberalised world markets. However, negotiating interconnection terms has stalled Clear's entry and further impeded its development, and that of others. As a result, some have suggested establishing a regulatory body.

While these "heavier-handed" bodies can provide a settlement more quickly than a court based system, they in themselves have problems. To be fair, the current regime's rules have not been tested so we have little idea on how it works or the speed at which it will work once tested. Therefore the current regime should be given time to prove itself.

Within this framework the Government, or an industry body, could comment on the common features of interconnect agreements so that parties have a broader base to work from when negotiating contracts. If this framework does not work, further regulatory controls should be considered, although structural separation would better maintain the Government's goal of a liberalised economy.

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98. See Commerce Commission, supra, note 7, pp 66-67. Arbitration is a process by which a quasi-legal forum imposes a decision on parties.

99. See Pengilley W., 'Mediation and Alternative Dispute Resolution: Some Australian Observations,' *The New Zealand Law Journal,* January 1992, pp 11-15. The author suggests mediation/alternative dispute resolution (ADR) as an alternative to litigation or arbitration in some circumstances. He states that mediation could be an alternative when (1) all parties have a commitment to the process; (2) an appropriate approach to ADR is needed, which includes (a) the need for compromise, (b) each party perceives a win/win situation, & (c) each party must be aware of the alternatives to ADR (ie. expensive litigation). While this is potentially a valid method for resolution, it could be difficult to reach agreement if either party does not want settlement. This will likely be the case with a dominant telecommunications company because any settlement will reduce their revenue. Therefore the only alternative would seem to be litigation or arbitration.

Chapter Eleven
Other Potential Anti-competitive Practices

11.1 Introduction

As well as pricing, cross-subsidy and interconnection issues, there are other practices a vertically integrated monopolist could engage in to retain or strengthen market power. Although this chapter can in no way discuss them all, it will look at the major issues when related to the telecommunications industry. Obviously preventing them will be important to the future development of competition within the industry.

The practices I will concentrate on are tying, price bundling and exclusive dealing. While these practices could affect any market, I will examine their effects in particular telecommunications markets. These markets are those for line resale by other parties; customer premise equipment; directory publication and assistance; and international calling. Then I will discuss the prospect of collusion between competitors, followed by the possible adverse effects acquisition of radio frequency rights could have on competition.

During these discussions I will use examples, in some cases hypothetical, followed by a discussion on how the antitrust courts have or may determine whether these acts are or will be anti-competitive. Then I will discuss other techniques used in New Zealand, Britain, Australia and the United States to limit the potential for anti-competitive activity. This summary will enable me to recommend policies to control this type of behaviour.

11.2 Tying and Price Bundling

A dominant vertically integrated monopolist will often have an advantage over a competitor who offers only one of the monopolist's services. This advantage stems from the monopolist's ability to contractually bind consumers to buy an entire range of product when the consumer requests the monopoly product. The monopolist could also offer a discount on an entire product range, while the competitor can do so over only one of these products. These

practices are called tying and price bundling and can limit a competitor from offering service to customers. They are actions associated with vertical integration and occur so that the monopolist can maintain or extend monopoly power into "competitive" markets. In this regard they are very similar, which leads me to separate the discussion of remedies from the anticompetitive potential of these practices.[1] I shall discuss each in turn.

Tying

Product tying occurs when the purchase of one good or service (tied product) depends on the purchase or lease of another (tying product).[2] While these arrangements need not be anti-competitive, the potential exists if the product which the tied good is linked to has natural monopoly characteristics. Such characteristics enable the monopolist to foreclose competition by making access to a competitive market dependant on accepting a tied agreement in a monopoly market.[3] Besides foreclosure, the agreement will also prevent a particular level or quality of service being selected by a consumer.

In the telecommunications industry the ability of the natural monopolist to tie competitive with non-competitive service has the potential to reduce competition where it currently exists. For example, Telecom New Zealand could instigate a policy of direct tying by only offering consumers local loop connection provided they agree to make all toll calls through Telecom - an action that would effectively prevent Clear Communications from offering a toll service due to the impracticality of replicating the local loop. Telecom could indirectly tie toll with local markets by not offering subscribers the option of connection to alternative toll carriers. While these actions may reduce or eliminate competition, other tying arrangements could prevent competitive entry. Telecom could tie products by bundling their costs together; for example, the cost of telephone directories, directory assistance, and line maintenance are tied to the charge for line rental.[4]

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1. See Gelhorn E., *Antitrust Law and Economics: in a Nut Shell,* third edition, West Publishing Company, Minnesota, 1986, p 313. He discusses the similarity in footnote 14.

2. Baldwin W.L., *Market Power, Competition, and Antitrust Policy,* Irwin, Homewood Illinois, 1987, pp 444-445. Also see Slawson W.D., 'Excluding Competition Without Monopoly Power: the Use of Tying Arrangements to Exploit Market Failure,' *The Antitrust Bulletin,* Summer 1991.

3. Schmalensee R., 'Commodity Bundling by Single-Product Monopolies,' *The Journal of Law and Economics,* vol 25, April 1982, pp 67-71 at 67.

4. See Department of Trade and Industry, *Competition and Choice: Telecommunications Policy for the 1990s: A Consultative Document,* pp 37-39. The report comments on British Telecom's product bundling: *'Local network operators at present offer customers directly a range of services as a single package. These include the physical connection from the customer's premises to the exchange, maintenance of this connection, switching facilities, directory enquiries and billing. These tend*

Irrespective of the anti-competitive potential, tying could occur for pro-competitive reasons. For example, tying one product with another could help that product's introduction to a market; it could even result because of inelastic demand for the products, or because the administrative costs of separation could be too great.[5]

Price Bundling

Price bundling refers to the aggregation of different services into one package by using a discount policy that covers these products.[6] In this way the package indirectly ties those products because the discount provides the consumer with an incentive to buy that package and not individual service from a variety of competitors. Such a practice, while having immediate benefits for consumers, will harm their interests in the long run because it will restrict competitive activity; deter market entry; or force competitors from the market. This will occur because these parties cannot economically replicate the natural monopoly to match the "favourable" discounting policy.

Telecom offers such a discount under its "Telecom Preferred Supplier Plan" (TPSP). This plan offers consumers discount on their national account (this includes local calls, national and international tolls, cellular calling, directory assistance and the provision of customer premise equipment). Consumers can enter this plan provided they meet certain volume conditions, inform Telecom of their telecommunication requirements, and give Telecom the opportunity to respond to the offer of any competitor.[7] While this agreement does not prevent supply from other providers, accepting an alternative may terminate the agreement because it could force volume below the threshold required for the plan. In this way Clear Communications and BellSouth's inability to replicate the PSTN will limit their ability to discount. Suppliers of

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to be included in a tariff structure which does not identify them separately. Customers are therefore denied the option of selecting between the services and paying only for those they want'. Also see Beesley M.E., and Laidlaw B., *The Future of Telecommunications: An Assessment of the Role of Competition in UK Policy,* Institute of Economic Affairs, London, 1989. And Pengilley W.J., *Some Thoughts on Telecom: The Trade Practices Law and the Dead Hand of Regualtion,* Australian Telecommunciations Group Conference, Melbourne, 18-21 April 1988.

5. Kahn A.E., and Shew W.B., 'Current Issues in Telecommunications Regulation: Pricing,' *Yale Journal on Regulation,* Vol 4(2), Spring 1987, pp 191-256, at 233. For an application of the pro- and anti-competitive potential of tying/bundling see Hurwitz M.A., 'Bundling Patented Drugs and Medical Services: An Antitrust Analysis,' *Columbia Law Review,* vol 91, 1991, pp 1188-1220.

6. See Payette L.B., 'Package Discounts: Risks Under the Antitrust Laws Against Tying and Monopolization,' *Idaho Law Review,* vol 23, 1986-87, pp 255-275.

7. See Department of Internal Affairs 'Telecommunications (Disclosure) Regulations 1990,' *The New Zealand Gazette,* Wellington, 25 October 1990, pp 4127-4128.

customer premise equipment face similar effects.[8] Therefore these agreements could be anti-competitive because they deter:

> ... entry into, or expansion in, markets where Telecom operates. This is because potential customers who have [TPSPs] are reluctant to jeopardise an arrangement which offers them a significant discount on a wide range of telecommunications products and services they use. Thus, suppliers assert that they are prevented from selling their products and services, in competition with Telecom, to potential customers who already have [TPSPs] because any advantages they offer are outweighed by the across the board discount available to [TPSP] customers.[9]

From these assertions it would seem that bundling has anti-competitive potential. However, such agreements can be pro-competitive when offered for legitimate reasons.[10] These reasons could relate to cost, for if the incumbent can offer certain customer's service at a reduced price, the price charged should reflect these efficiencies. It could also act as a marketing device to introduce a new product to a market or be designed to retain existing custom in a similar way to other businesses. Telecom's discount contract could be an example of the first. TPSP holders must:

> Pay all accounts received from Telecom on time, every time. In the event of a disputed account, the customer shall only withhold payment of the precise amount in dispute; Designate a point of contact for the reporting of faults to Telecom; Provide, as far as is practicable, a coordinated and centralised decision making process for the purchase of Telecom's telecommunications services.[11]

Antitrust Remedies

In response to the potential for anti-competitive conduct arising from the above practices, some governments have used antitrust law to provide relief. American courts have the most experience in this area and have discussed the issue of tying extensively under section 3 of the Clayton Act, which controls tying and exclusive dealing; and section 1 of the Sherman Act, which outlaws contracts or combinations restraining trade.[12] Traditionally, American courts

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8. Essentially, this situation is similar to that occurring in Britain and Australia. In Britain Mercury Communications (MCL) is not fully integrated; although the potential problem is not as large because neither BT or MCL hold cellular licences. In Australia Optus Communications (OCL) face a similar problem because of local loop dominance by AOTC.

9. Commerce Commission, *Telecommunications Industry Inquiry Report,* Wellington, 23 June 1992, p 32.

10. Department of Trade and Industry, supra, note 4, p 69. The report comments on the UK's Director General of Telecommunications acceptance of discounting for cost-related reasons.

11. Department of Internal Affairs, supra, note 7, p 4127.

12. Although action could also be taken under section 2 of the Sherman Act which prohibits monopolisation.

have concluded that tying arrangements are illegal per se.[13] However, this conclusion fails to consider the potential for efficiencies that such arrangements have.

One can trace the origins of the per se rule to 1936. In that year the Supreme Court, in *IBM v United States,* condemned a tying arrangement that linked the leasing of computer equipment (in which IBM had a monopoly) to the supply of computer cards.[14] Similarly, in 1947, the Supreme Court ruled against a requirement that lessees of the International Salt Company could only use salt bought from that company in their leased machines. The Court was clear on this matter:

> ... it is ... unreasonable, *per se,* to foreclose competitors from any substantial market. The volume of business affected by these contracts cannot be said to be insignificant or insubstantial and the tendency of the arrangement to accomplishment of monopoly seems obvious.[15]

The Supreme Court applied similar reasoning to the 1953 *Times-Picayune Publishing* case where it ruled that a requirement tying the purchase of advertising space in one newspaper with another violated the Sherman and Clayton Acts.[16] Following its earlier judgments, in *Northern Pacific* the Supreme Court applied the per se label to tying arrangements for the first time. It justified this stance by commenting:

> ... [tie-ins] deny competitors free access to the market for the tied product, not because the party imposing the tying requirements has a better product or a lower price but because of his power or leverage in another market. At the same time buyers are forced to forego their free choice between competing products.[17]

While these cases established per se illegality, the Court did not apply this treatment when firms imposing ties lacked market power, in respect of the tying product, or when the tying arrangement related to an insubstantial amount of commerce.[18] The Court was also prepared to

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13. Weiss L.W., and Strickland A.D., *Regulation: A Case Approach,* second edition, McGraw-Hill Book Company, New York, 1982, p 24. Also Gelhorn, supra, note 1, pp 313-327.

14. *International Business Machines Corporation v United States,* (1936) 298 US 131.

15. *International Salt Company v United States,* (1947) 332 US 392 at 396.

16. *Times-Picayune Publishing Company v United States,* (1953) 345 US 594.

17. *Northern Pacific Railway Company v United States,* (1958) 356 US 1 at 6. The Court also made reference to the per se illegal nature of various acts; the comment: *'... there are certain agreements or practices which because of their pernicious effect on competition and lack of any redeeming virtue are conclusively presumed to be unreasonable and therefore illegal without elaborate inquiry as to the precise harm they have caused or the business excuse for their use. ... Among the practices which the courts have heretofore deemed to be unlawful in and of themselves are price-fixing, division of markets, group boycotts, and tying arrangements'.*

18. Ibid, at 6-8. Baldwin, supra, note 2, p 451. The author comments on the desirability of separating monopoly and non-monopoly products from the per se rule; he states: *'... a tying arrangement may put on competitors the burden of acquiring enough capital to produce a similar or substitute product. In some cases, this may be unreasonable: the predatory purpose of the tying arrangement may be evident. In others, the burden may be fairly light or justified by the objectives of the firm imposing the tying arrangement'.*

accept tying arrangements when used to introduce new technology,[19] or if it established a franchise agreement.[20]

More recently the Court has modified its stance over the per se ruling for tying arrangements because it has recognised that tying may not always restrain competition in the market for the tied product. To this end the Supreme Court, in *Fortner II Enterprises*,[21] tightened its per se rule by obliging the plaintiff to independently prove the defendant had '*appreciable economic power*' in the tying market. In *Jefferson Parish* the Supreme Court was asked by the Department of Justice to abandon the per se rule in favour of the rule of reason standard. The majority of the Court declined to accept this request, although the four concurring justices were prepared to accept this view. However, the Court considered it appropriate, by referencing past case law, to establish the criteria they would use in determining whether the per se test was appropriate:

> (a) the sale or lease of one product must be conditioned on the purchase or lease of another product; (b) the two tied products or services must be separate and distinct; (c) the seller must have sufficient economic power in the market for the tying product to enable it to "force" the buyer to purchase the tied product from the seller; and (d) a not insubstantial amount of interstate commerce must be affected.[22]

Finally, the Supreme Court in *Eastman Kodak Company* was asked by Image Services whether Kodak's practice of not selling replacement parts to independant service organisations was an attempt to tie equipment repair with the purchase of equipment. The majority of the Court agreed that Kodak was not dominant in the equipment market, but once the equipment had been purchased, Kodak was dominant in the repair market - a market that was constitued by a particular brand and not by the equipment market generally.[23] This decision, in effect, extends the per se rule of *Jefferson Parish* by not requiring market power in the equipment market. Instead, the sunk cost of purchase will be sufficient to establish power.

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19. *International Business Machines,* (1936) 298 US 131. The Court did not allow the tying of computer punch cards with the leasing of IBM tabulating machines. Also *United States v Jerrol Electronics Corporation,* (1960) 187 F. Supp 545; (1961) 365 US 567. In this case the Court allowed the tying of 'complete community television antenna systems' to establish the reliability of the Jerrol system. However, once established the tie was to cease.

20. See *Susser v Carvel Corporation,* (1964) 332 F 2d 505; also *Siegel v Chicken Delights, Inc.,* (1971) 448 F 2d 43; also *Principle v McDonald's Corporation,* (1980) 631 F 2d 303.

21. *United States Steel Corporation v Fortner II Enterprises, Inc.,* (1977), 429 US 610.

22. *Jefferson Parish Hospital District No 2 et al v Hyde,* (1984) 80 L Ed 2d 27. Also see Mc David J.L., *Kodak Decision Revitalizes Tying Claims,* Franchise Law Journal, Summer 1992, p 3.

23. *Eastman Kodak Company v Image Technical Services,* (1992) 60 USLW 4465.

Obviously if tied goods are available individually the issue of direct product tying does not result.[24] The question turns to whether the combination of goods have been discounted in an anti-competitively manner when compared to an individual purchase. The Supreme Court, in *US v Loew's*, adopted a "cost-justified" stance when determining whether a pricing differential between a package and an individual good was anti-competitive.[25] A favourable terms standard was developed by the Fourth Circuit Court of Appeals in *Advanced Business Systems*. The Court held that *`[t]ie-ins are non-coercive, and therefore legal, only if the components are separately available to the customer on a basis [sic] as favourable as the tie-in arrangement'*.[26] Finally, the Ninth Circuit Court of Appeals in *Waikiki U-Drive v Budget* looked to see whether there was a significant market for the product, irrespective of the discount. In finding a significant market, the Court was reluctant to judge the discount anti-competitive.[27]

In *SmithKline* the District Court faced the issue of whether a bonus rate scheme extended monopoly power. In concluding that it did, it clearly distinguish tying from discounting:

> While Lilly successfully escaped the *per se* liability imposed with the use of an illegal tie-in, the defendant, nevertheless, clearly abridged the provisions of section 2 of the Sherman Act by linking products on which it faced no competition ... with a competitive product. The result was to sell all three products on a noncompetitive basis in what would have otherwise been a competitive market.[28]

The standard applied under British,[29] Australian and New Zealand laws is generally rule of reason. The substantive provisions of Australian and New Zealand laws are similar. Section 46 of the Australian Trade Practices Act (TPA) (section 36 of the New Zealand Commerce Act (CA)) prohibits conduct that prevents, deters, restricts or eliminates competition, while section 45 (CA, section 27) forbids contracts, arrangements or understandings, that substantially lessen competition in a market. Beside these sections, section 47(2)(d) of the TPA (no equivalent CA section) could prohibit tying agreements if that agreement limits a customers from acquiring products from another party. However, the extent to which the courts construe tying to be a

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24. *Northern Pacific Railway*, (1958) 356 US 1, at 6. For an overview of price bundling see Payette, supra, note 6.

25. *United States v Loew's Inc.*, (1962) 371 US 38.

26. *Advance Business Systems & Supply v SCM Corp.*, (1969) 415 F2d 55, at 62.

27. *Robert's Waikiki U-Drive v Budget Rent-A-Car Systems Inc*, (1980) 491 F Supp 1199, *aff'd*, (1984) 732 F2d 1403 (9th Cir).

28. *SmithKline Corp v Eli Lilly & Co*, 427 F Supp 1089 at 1121. Also see *SCM Corp v Xerox Corp*, (1978) 463 F Supp 983, at 1015; *White and White Inc v American Hospital Supply Corp*, (1982) 540 F Supp 951, *rev'd*, (1983) 723 F2d 495 6th Cir.

29. Merkin R., 'The Monopolies and Mergers Commission: Discriminatory Discounts and Tying arrangements,' *The Modern Law Review*, vol 45(1), Jan 1982. The author discusses the 1980 Competition Act and 1973 Fair Trading Act.

form of exclusive dealing could limit the application of this section. Taperell et al., when discussing a tying arrangement, explain:

> In substance, the supply of the copying machine or refrigerator [for example] is made conditional upon the acquirere limiting the extent to which he acquirers goods from others because, even though the customer in each case is free to buy copying paper or ice cream from others, he cannot do so for use or storage in the hired machinery.[30]

For this reason sections 45 and 46 will capture tying agreements if section 47 does not apply.

While substantial case law exists in America, Australasian case law on tying is sparse. However, the Full Federal Court of Australia, in *ASX Operations v Pont Data Australia,* has discussed the issue of tying. The facts of the case were that Pont signed an agreement with ASX for the supply of an electronic signal, which conveyed stock exchange information from ASX to Pont. That signal was a monopoly product because ASX's parent company supplied the signal as a statutory monopolist. This right, in turn, enabled ASX, a competitor in the same market as Pont, to require that Pont could only resell that information if ASX received information concerning the recipients of the signal. Although signing that request, Pont petitioned the Court to deem that agreement anti-competitive under section 45, because tying the supply of information with the monopoly signal would have the effect of substantially lessened market competition. The Court agreed with Pont's claim.[31]

In spite of general antitrust law, the Australian Government has included, in part 9 of the Telecommunications Act 1991 (TA), specific antitrust provisions that overlap many of the provisions in part four of the TPA.[32] The TA directs attention toward non-discrimination for the supply of basic carriage service. In this regard division 3 of this part gives AUSTEL the ability to direct the unbundling of the basic carriage service; division 4 prevents a dominant carrier discriminating between other suppliers of common carriage.[33]

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30. See Taperell G.Q., Vermeesch R.B., and Harland D.J., *Trade Practices and Consumer Protection: A Commentary on the Trade Practices Act 1974,* third edition, Butterworths, Sydney, 1983, pp 345-346, pp 356-357.

31. *ASX Operations Pty & Anor v Pont Data Australia Pty Ltd,* (1991) ATPR 41-069.

32. See Hodgekiss C., and Young N., 'Restrictive Trade Practices: In the Telecommunications Industry,' *Australian & New Zealand Trade Practices Law Bulletin,* Vol 7(6), November 1991, pp 45-56 and vol 7(7), November/December 1991, pp 57-61 at 57.

33. Buckley T., 'The Telecommunications Act 1991,' *Law Institute Journal,* vol 65, September 1991, pp 849-850 at 849. Also Taperell G., 'Misuse of Market Power in Telecommunications: The Legislative Safeguards,' in Corones S.G., *Competition Policy in Telecommunications and Aviation,* Federation Press, Sydney, 1992, pp 179-197, at 182. And Holmes J., 'The Telecommunications Act 1991 and its Meaning for Consumers and Competition,' in Corones S.G., *Competition Policy in Telecommunications and Aviation,* Federation Press, Sydney, 1992, pp 217-232, at 231.

Concerning action, the right exists for privately initiated and AUSTEL initiated suits against carriers under the TPA and TA, although the TPA will always deal with non-basic carriage. However, the TPA cannot be used for basic carriage if: (1) the Minister of Transport and Communications allows the act; (2) AUSTEL allows it; (3) a telecommunications licence includes it; or (4) if a "registered" interconnect agreement includes it. Otherwise the statute selected will depend on the level of market power required to establish liability?[34]

11.3 Exclusive Dealing

Besides tying consumers to one source of supply, the monopolist could limit competition in other markets by forcing "down-the-line" dealers or "up-the-line" suppliers to deal exclusively with the monopolist. In this way exclusive dealing represents a form of tying arrangement. However, I separate this discussion from tying because the monopolist does not use a tying product to tie a competitive market; instead the market is tied by preventing the dealing with others.[35] This arrangement could be anti-competitive if it has the objective of foreclosing competitors from either market. However, the arrangement could be pro-competitive if it has the objective of giving retailers - or even the manufacturer - the incentive to promote a product more actively.[36]

When related to telecommunications, Telecom imposes exclusive dealing restraints on suppliers (TASPs), who have been approved by Telecom to supply retailers with air time to the Telecom Cellular Service. These retailers sell handsets and sign consumers, through the TASP, to the cellular network. Besides exclusive dealing the TASPs have a confidentiality obligation to Telecom, but can set their own rates for service.

Despite the similarity between exclusive dealing and tying, the American courts have considered exclusive dealing arrangements under a rule of reason rather than a per se standard.

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34. Hodgekiss et al., supra, note 32, p 48. The authors comment on the different threshold between the two statutes. They contend that the TPA has the lower threshold of *'substantial degree of market power'* while the TA uses that of a *'dominant carrier'*. The Trade Practices Commission will initiate action under the TPA while AUSTEL has responsibility for the TA. AUSTEL can also *'refer matters to the Trade Practices Commission if it forms the opinion that the matter could be more conveniently or effectively dealt with by the Commission'*. See Taperell, supra, note 33, p 186. For discussion on the "dominant carrier" test see Leonard P., and Walters P., 'Regulating for Competition: The Telecommunications Act 1991,' in Corones S.G., *Competition Policy in Telecommunications and Aviation,* Federation Press, Sydney, 1992, pp 73-110, at 99-102. Dominance obtains its meaning from section 50 of the Trade Practices Act which governs business acqusitions.

35. Gelhorn, supra, note 1, p 328.

36. See Marvel H.P., 'Exclusive Dealing,' *Journal of Law and Economics,* vol 25(1), April 1982, pp 1-25.

The Supreme Court, in *Standard Oil,* developed the rule of reason standard, as it related to exclusive dealing, by showing a willingness to consider the economic effects of the foreclosure.[37] The Supreme Court, in *Tampa Electric,* further developed this standard by undertaking a more rigorous investigation of the economic effects of the dealing agreement. When determining whether the exclusive dealing arrangement substantially lessened competition - the test under section 3 of the Clayton Act - the Court explains its justification for rule of reason analysis:

> To determine substantiality in a given case, it is necessary to weigh the probable effect of the contract on the relative strength of the parties, the proportionate volume of commerce involved in relation to the total volume of commerce in the relevant market area, and the probable immediate and future effects which pre-emption of that share of the market might have on effective competition therein. It follows that a mere showing that the contract itself involves a substantial number of dollars is ordinarily of little consequence.[38]

When related to the Australasian context, section 47 of the Australian TPA will generally prohibit exclusive dealing if the agreement substantially lessens competition in a market. However, if the agreement involves product forcing (sometimes referred to as third line forcing), such forcing is subject to a per se prohibition under subsections (6)-(9).[39] New Zealand's Commerce Act, on the other hand, does not include a similar provision, so like tying and price bundling, sections 36 and 27 will govern exclusive dealing arrangements.[40] Under section 27 the High Court, in *Fisher & Paykel,* was prepared to accept that exclusive dealing arrangements had both pro- and anti-competitive effects. It concluded the positive effects needed to be weighed against the negative in order to determine the net effect on competition.[41] Similarly, the High Court, in *Telecom v Commerce Commission,* commented on Telecom's exclusive dealing arrangement with its TASPs. When discussing whether these arrangements constitute an entry barrier, the Court comment that they do not:

> ... in itself preclude another company within the same group from contracting with another cellular operator. Moreover, the TASP has a right of termination on three months' notice ... While these

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37. *Standard Oil Company of California v United States,* (1949) 337 US 293.

38. *Tampa Electric Company v Nashville Coal Company,* (1961) 365 US 320, at 329.

39. See Hanks F., and Williams P., 'The Treatment of Vertical Restraints Under the Australian Trade Practices Act,' *Australian Business Law Review,* April 1987, at 147. Also Miller R.V., *Annotated Trade Practices Act,* tenth edition, The Law Book Company Ltd, Sydney, 1989, p 103. Also Taperell et al., supra, note 30, chapter 7.

40. See *Fisher & Paykel Ltd v Commerce Commission,* (1990) 3 NZBLC 101,655, at 101,667.

41. Ibid.

> arrangements no doubt make for something of a commercial challenge, we do not assess them as constituting a barrier to entry.[42]

Therefore the New Zealand courts seem prepared to discuss the pro- and anti-competitive reasons for exclusive dealing.

11.4 Leased Lines and Line Resale

Subscribers who extensively use telecommunication services may find it cheaper or more convenient to lease dedicated lines to meet their calling needs. Often specific needs give them no choice in this matter.[43] Leased lines could establish a dedicated toll link so callers from a toll area can contact the organisation as if it were a local call. That link, on the other hand, could be either local or toll to allow for rapid data or voice communication between two parts of an organisation. Typically, the capacity of these lines will be greater than the firm can handle by itself. For this reason it may wish to resell any surplus to other firms.[44] Besides this, organisations can buy capacity for resale to meet the "specific" communication needs of others.

The ability to resell came with the liberalisation of telecommunication markets.[45] The objective of allowing resale was to promote competition in local and toll networks where facility replication was not possible or had not yet developed.[46] However, point-to-point contact will be the key to any reselling agreement; therefore Telecom can discriminate between parties that lease lines because no other competitor can replicate the Public Switched Telephone Network (PSTN).

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42. *Telecom Corporation of New Zealand v Commerce Commission & Ors,* (1991) 3 NZBLC 102,340, at 102,379.

43. Commerce Commission, supra, note 9, p 34. Also see Crook J., *How Realistic is Open Competition?,* 1991 Australian Telecommunications Law and Policy Symposium, Sydney, 26 September 1991.

44. See Rothwell W., 'Australia's New Telecommunications Regime: Optimising Competition for Cautious Consumers,' in Corones S.G., *Competition Policy in Telecommunications and Aviation,* Federation Press, Sydney, 1992, pp 233-244, at 236.

45. Carsberg B., 'Injecting Competition into Telecommunications,' in Veljanovski C., *Privatisation & Competition: A Market Prospectus,* Institute of Economic Affairs, London, 1989, pp 86-87. Carsberg comments that the Government disallowed resale because with current tariffs for those services entrants could undercut BT. While this could be remedied by increasing price, that increase would adversely effect firms that had invested in technology based on that price. For these reasons resale was prohibited subject to review in 1989.

46. Touche Ross, *Competition in Telecommunication Networks,* Department of Trade and Industry, Wellington, 1987, pp 51-52. For an international justification see Beesley M.E., *Liberalisation of the use of British Telecommunications Network,* Report to the Secretary of State, Department of Industry, London, January 1981.

Telecom's incentive to discriminate comes from the desire to retain and maintain revenue. Obviously any line rental agreement will maintain revenue, but the ability of the recipient to on-sell all or part of that capacity to other consumers will reduce Telecom's collection. To maintain revenue Telecom could prevent capacity wholesaling; restrict the price at which that wholesaling could occur; or offer contracts on discriminatory terms. It could even favour its own reseller by providing it with circuits of higher quality or offering that reseller first option on any available circuits. These initiatives would prevent revenue "by-pass" of the PSTN.

However, if discrimination occurs a dominant carrier leaves itself open to action under section 36 for alleged prevention, restriction or deterrence of entry into the market for resale. Section 27 could also be relevant because the line rental agreement could substantially lessen competition in a market. There is also the possibility of using section 37 - which prohibits resale price maintenance[47] - but this section may not be applicable to telecommunications because of its reference to goods and not services.[48] Therefore sections 36 and 27 will be the only forms of relief.

The potential of sections 36 and 27 (sections 46 and 45, TPA) was evident in *ASX Operations v Pont Data* where an ASX subsidiary inserted a provision in its contracts that forbade customers of Pont reselling monopoly signal C to other customers.[49] The Full Court of the Federal Court of Australia ruled that the provision breached these sections, because it prevented entry into the market for wholesale information and had the effect of substantially lessening competition in that market.

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47. For discussion see van Roy, Y., *Guidebook to New Zealand Competition Laws*, second edition, Commerce Clearing House, Auckland, 1991, chapter 8. Also see Pengilley W., 'Resale Price Maintenance under the Commerce Act,' in Ahdar R. ed., *Competition Law and Policy in New Zealand*, The Law Book Company Limited, Sydney, 1991, pp 249-279. Finally, Pengilley W., Resale Price Maintenance Law and Dealership Problems: Recent Trends, *The New Zealand Law Journal*, February 1990, pp 60-67.

48. *ASX Operations*, (1991) ATPR 41-069, at 51-127. The trial judge commented on the inclusion of electricity in section 4(1) of the TPA (section 2(1) CA): *'It cannot, I think, be doubted that, as Parliament intended the word 'goods' to be understood as including electricity, it also intended it to include encoded electrical impulses ...'*. On appeal the Federal Court of Australia reversed this interpretation because it concluded that the encoded signals were in fact services. Hodgekiss et al., supra, note 32, p 58. Based on the above judgement the author's comment on the inapplicability of section 49 to telecommunications. Similarly, section 49 of the TPA dealing with price discrimination is not relevant to services. Also *Toby Construction Products Pty Ltd v Computer Bar Sales*, (1983) ATPR 40-377. Pengilley, ibid, p 260.

49. *ASX Operations*, (1991) ATPR 41-069, at 52-064-065.

The Americans have discussed similar prohibitions on resale. Traditionally, American courts have concluded arrangements dividing markets or restricting resale are per se illegal.[50] The Supreme Court, in *Schwinn*, explains this rule when related to non-price restraints:

> Once the manufacturer has parted with title and risk, he has parted with dominion over the product, and his effort thereafter to restrict territory or persons to whom the product may be transferred - whether by explicit agreement or by silent combination or understanding with the vendee - is a *per se* violation of section 1 of the Sherman Act.[51]

However, such reasoning was a mere extension of the per se rule that related to horizontal agreements.[52] For this reason the Court, in *Sylvania*, overturned the reasoning in *Schwinn* to adopt a rule of reason standard. Adoption of that standard allowed the Court to consider efficiency along with anti-competitive justifications for the vertical restraint. In this light the Supreme Court commented on the place of per se rules of illegality: *`per se rules of illegality are appropriate only when they relate to conduct that is manifestly anticompetitive'*.[53]

In contrast to the rule of reason standard adopted for non-price vertical restraints, the Courts have considered resale price maintenance (RPM) under a per se rule.[54] But as with non-price restraints, the supplier could use RPM for competitive reasons.[55] For this reason the Department of Justice, in *Monsanto v Spray-Rite*, asked the Supreme Court to move from a per se standard to that of rule of reason.[56]

Irrespective of the anti-competitive nature of these practices, discrimination may inspire competitive network companies to by-pass the monopolist's facilities more quickly than they otherwise would have. This will occur if the volume of traffic will economically justify this action. For example, in the local market an alternative supplier could provide service by direct microwave or cable link between physically separate parts of the organisation. Cable linkage could also provide the framework for establishing a local-loop around high-volume centralised

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50. Gelhorn, supra, note 1, p 280.

51. *United States v Arnold, Schwinn & Company & Ors,* (1967) 388 US 365, at 382.

52. Gelhorn, supra, note 50, at 280.

53. See *Continental TV Inc v GTE Sylvania Inc,* (1977) 433 US 36.

54. See *Dr Miles Medical Company v John D Park and Sons Company,* (1911) 220 US 373.

55. For authority see Telser L.G., 'Why Should Manufacturers Want Fair Trade,' *Journal of Law and Economics,* vol 3, October 1960. Also Marvel H.P., and McCafferty S., 'Resale Price Maintenance and Quality Certification,' *Rand Journal of Economics,* vol 14, Autumn 1984.

56. *Monsanto Company v Spray-Rite Service Corporation,* (1984) 79 L. Ed. 2d 775.

business areas. Such a loop could then connect to toll facilities to provide an alternative source of toll by-pass. Network interconnection will also help prevent the ability to discriminate, although the terms of that agreement will be a critical factor in determining this.

11.5 Customer Premise Equipment

A vertically integrated monopolist could use local loop power to achieve an anti-competitive purpose in other markets. One of these markets could be customer premise equipment (CPE). In this market the monopolist could bundle, tie or use other practices to prevent or restrict competition. These other practices will be the focus of this section as I have already discussed the potential for bundling and tying in a previous section.

CPE have the function of originating and terminating the telecommunications network. They include a wide variety of items, ranging from the simple telephone to facsimile machines, paging equipment, computer modems and microwave transmission equipment.[57] Obviously if this equipment did not meet relevant technical standards its connection could damage the network or disrupt other consumers from using the network. For this reason the equipment must pass a certification procedure before it can legally connect to a network.[58]

Often an independent authority will conduct this process, but if such an authority does not exist the dominant carrier will often perform the task of determining what equipment can and cannot be connected to the network. Such a practice gives the dominant carrier an incentive to delay and overprice the certification of competitors' products while expediting the certification of his/her own products.[59]

The New Zealand Government has adopted the dominant carrier approval approach, with Telecom establishing an Access Standards Section within its Corporate Policy Department. Telecom instructed this section to act "on an arm's length basis" with any customer who wishes connection approval. However, irrespective of instruction, common ownership gives the standard approval section the incentive to discriminate between alternative suppliers. This potential led the Commerce Commission to comment:

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57. Commerce Commission, Supra, note 9, p 60. See this report for other types of CPEs.

58. Organisation for Economic Co-operation and Development, *Telecommunications Type Approval: Policies and Procedures for Market Access*, OECD, Paris, 1992, p 23.

59. Ibid, pp 13-15. The OECD recognise the desirability of separating network operation from the certification process. They comment on this being the accepted practice in most OECD countries.

> Telecom's certification procedures include testing of equipment that is to be used for interconnection purposes. Telecom *controls the timing and nature* of those testing procedures ... [with] *fees for application* [varying].[60]

To Telecom's credit, it does not appear to have taken advantage of this potential for abuse because independent laboratories conduct much certification work with fees paid directly to those laboratories. They have even suggested, in unison with the Telecommunications Users Association of New Zealand (TUANZ), shifting that responsibility to an independent standards authority.[61] Should their attitude change, alternative suppliers could take action under section 36 of the Commerce Act. Such action would allege that Telecom was using its dominance to prevent, deter, restrict or eliminate competition.

Apart from legal remedies, other countries have preserved the competitive integrity of the CPE market through other means. For example, the British, Australian and United States Governments have fully independent organisations to certify the appropriateness of equipment.[62]

11.6 Directories and Directory Assistance

When discussing interconnection, I mentioned the problem arising from the allocation of telephone numbers to subscribers. Local-loop and cellular competitors will require allocation from a national plan so they can start their operation and so they will not be disadvantaged when compared to the monopolist. The issues of directory publication and caller assistance will also pose problems.

Telephone directories contain publicly available telephone number information. When consumers do not have access, or have difficulty finding a number, a centralised office will offer assistance. In New Zealand Telecom's databases contain billing name and address information (BNA), which enable them to publish these directories. It also enables Telecom to assist callers when they do not have numbering information. The ability to do this comes from number ownership.

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60. Commerce Commission, supra, note 9, p 31. [emphasis added]

61. Ibid, p 31.

62. Carsberg, surpa, note 45, p 84. The author (director general of telecommunications) comments: *'apparatus is now approved by me, under delegated authority from the Secretary of State, after evaluation by an independent valuation authority and testing in approved laboratories'*. Also OECD, supra, note 58, pp 28.

Ownership gives Telecom an incentive not to publish information concerning competitor numbering blocks, nor assist callers requiring information concerning numbers allocated to competitors. Competitors could publish their own directories and provide number assistance; however, their ability to do this would be limited to the extent that Telecom claims copyright over published directories, or refuses to supply BNA information to other potential publishers.[63]

Such actions by Telecom could be anti-competitive. The courts would determine this by applying section 36 of the Commerce Act. For liability to result, the plaintiff must prove that ownership of the numbering plan places Telecom in a dominant position, which they used to prevent, restrict or deter entry into the publication and consumer assistance markets.[64] The potential for this problem relates to Telecom's ownership of the National Numbering Plan. Other countries have resolved this issue by allowing a regulator or independent body to administer the plan. This action allows competitors to publish directory information.[65] If this does not occur the regulator or independant body may take further action.[66]

11.7 International Agreements

Up to this point, I have proceeded on the assumption that the telecommunication network relates only to national calling. However, this network transcends national boarders, which gives the potential for anti-competitive practices in international markets. This potential could relate to line resale, interconnection, or pricing, although there is potential for other forms of discrimination. This section will address these concerns.

International telecommunications refers to any service that passes either by fixed line, radio communication or satellite communication from one country to another. The use of these links can enable a dominant party in one country, or an intermediate country, to discriminate between suppliers in another country; or direct traffic toward a particular supplier in that

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63. Competitors are also limited by Telecom tying the supply of the telephone directory to local line rental rates. See section 11.2 for further discussion.

64. See *Telecom v MCI/Todd.* This case partly concerns Telecom's right to prevent the defendant from obtaining access to BNA information. Although filed in May 1990, this action has yet to be heard.

65. See Boulter W.G., McConnaughey J.W., and Kelsey F.J., *Telecommunications Policy for the 1990s and Beyond,* M.E. Sharpe Inc, New York, 1990, pp 276-278, 407.

66. Hodgekiss et al., supra, note 32, p 47.

country.[67] Similarly, as the Government's designated signatory to international satellite capacity supply agreements (Intelsat and Inmarsat), Telecom controls access to satellite capacity. Thus Telecom can discriminate between suppliers wanting satellite service.[68]

Obviously section 36 of the Commerce Act could adequately deal with any abuse of power when allocating capacity, but its role in preventing discrimination by overseas carriers must be questioned. Dominant acts by trans-tasman carriers have the potential to be caught under section 36A, which deals with trans-tasman markets and is similar in content and operation to section 36. However, section 36A does not apply outside trans-tasman markets. Similarly, it excludes breaches that relate exclusively to the provision of service.[69] Because antitrust law does not provide a remedy, the Government should consider using other forms of control. For this reason the Government requires overseas carriers to register so that:

> ... the registered operator [must] pay the same rates of settlements, in accordance with the same accounting method, that an overseas operator charges other registered operators; and to terminate or transit traffic with an overseas operator in direct proportion to the returning traffic carried by the overseas operator.[70]

11.8 Collusive Agreements

With competitors entering a market, prices for services within that market tend to fall to a competitive level while quality of service will improve. This occurs because previously captive customers now have a choice between suppliers However, it will not always occur if these suppliers collude on the terms and price of service.

Collusive agreements occur between competitors and are designed to limit output so that price will increase to a level that would have occurred in a monopoly market. For example, Telecom could form an agreement with Clear Communications to set toll market prices. Telecom could also reach agreement with BellSouth over the price of cellular service. For these reasons such agreements should be prevented because they result in allocative inefficiencies. However, price fixing need not be anti-competitive but may occur for valid

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67. See Prebble R., *Implementing Telecommunications Deregulation,* Office of the Minister for State-Owned Enterprises, Wellington, 16 June 1988, p 6.

68. Ministry of Commerce, *Telecommunication Information Leaflet No 1: New Zealand Regulatory Environment for Telecommunications,* Wellington, 28 November 1991, p 6.

69. This is a similar problem to that encountered under sections 48 and 49 of the TPA; see *ASX Operations,* (1991) ATPR 41-069, supra, note 48. The exception here is that the right of action in this case depends on ones definition of "exclusively".

70. Minsitry of Commerce, surpa, note 68, pp 3-4.

business reasons. In this regard commentators have asked whether agreements are formed not so much to raise price, but to protect the industry from adverse business conditions?[71]

American law is the most developed in the area of collusive agreements. The standard of per se illegality was developed in *US v Trenton Potteries* where the Supreme Court held that an agreement between 82 per cent of the country's toilet and bathroom fixture manufacturers was illegal per se. The Court was adamant about the desirability of a per se standard over the alternative rule of reason because of its inability to distinguish pro- from anti-competitive agreements. In a famous passage the Court explained its rationale for condemning price fixing agreements:

> The aim and result of every price-fixing agreement, if effective, is in the elimination of one form of competition. The power to fix prices, whether reasonably exercised or not, involves power to control the market and to fix arbitrary and unreasonable prices. ... Agreements which create such potential power may well be held to be in themselves unreasonable or unlawful restraints, without the necessity of minute inquiry whether a particular price is reasonable or unreasonable ... Moreover, ... we should hesitate to adopt a construction making the difference between legal and illegal conduct in the field of business relations depend upon so undertake a test as whether prices are reasonable ... [72]

The per se rule was abandoned by the Supreme Court in *Appalachian Coals v US* in 1933, but re-established by the same Court in *US v Socony Vacuum Oil*.[73] This later case has been reaffirmed by the Supreme Court in subsequent cases.[74]

Australasian laws dealing with price fixing agreements employ a similar standard. Section 30 of the Commerce Act (section 45A TPA) deems contracts that fix, control or maintain price per se illegal. The courts will find illegality if the contract substantially lessens competition in terms of the prohibition contained in section 27.[75] The courts have upheld per se rulings on a

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71. See Phillips A., *Market Structure, Organization and Performance*, Harvard University Press, Cambridge Massachusetts, 1982, at 195. He comments: *'raise the question of whether it is not more likely that overt conspiracies of this kind occur in markets in which rivalry is severe rather than in markets in which competition is stifled'*. Gelhorn, supra, note 1, p 178. He comments on the *Appalachian Coals* verdict for it was formulated in response to *'the "deplorable" economic conditions of the coal industry and to the obvious need for reform and reorganisation'*.

72. *United States v Trenton Potteries Company*, (1927) 273 US 392.

73. See *Appalachian Coals Inc, v United States*, (1933) 288 US 344. The Court broke the per se rule because they state: *'realities must dominate the judgment. The mere fact that the parties to an agreement eliminate competition between themselves is not enough to condemn it'*. Also see *United States v Socony Vacuum Oil Company*, (1940) 310 YS 150, (Madison Oil).

74. *Arizona v Maricopa County Medical Society*, (1982) 457 US 332.

75. For discussion see Stevens L.L., and Dean M.R., 'Horizontal Price Fixing and Competitor Collusion: In Search of Workable Bounds,' in Ahdar R. ed., *Competition Law and Policy in New Zealand*, The Law Book Company Limited, Sydney, 1991, pp 155-178. For American summary see pp 162-166. New Zealand application pp 166-178.

number of occasions,[76] although their interpretation of fixed, controlled or maintained has prevented prosecution in others.[77] Section 27 (section 45 TPA), on the other hand, is more broad in scope and employs a rule of reason standard which prevents activity that has the purpose, effect, or likely effect, of substantially lessening competition in a market?[78]

11.9 Radio Technology

To date I have considered only fixed cable links (PSTN) when discussing telecommunications. However, radio technology provides another means of contact. The main advantage of radio over fixed links comes with its mobility, it also has the potential to remove, or at least reduce, the PSTN's remaining "natural" monopoly characteristics.[79] Nevertheless, connection to the PSTN will be necessary so callers from either technology can contact those of another. For this reason inter-network connection must occur (interconnection). Therefore "mobile radio services" are eliminated from my discussion so I can concentrate primarily on cellular service, although it will have relevance to telepoint service.[80]

Obviously interconnection will be important; however, connection will not be discussed here because those issues were covered in chapter ten. Instead, this section discusses the allocation of "scarce" radio frequency rights and how allocation could effect the ability to compete in a market now; how it could affect the potential for future industry development; and

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76. See *Trade Practices Commission v Cook-On Gas Products Pty Ltd,* (1985) ATPR 40-560. Also *Trade Practices Commission v Pioneer Concrete (Vic) Pty Ltd,* (1985) ATPR 40-590. Also *Trade Practices Commission v David Jones (Australia) Pty Ltd,* (1986) 13 FCR 446.

77. See *Radio 2UE Sydney Pty Ltd v Stereo FM Pty Ltd,* (1982) 62 FLR 437; here the Court distinguished between direct and indirect price fixing and that the definition of the word fix must relate to maintain and control. Upheld on appeal 68 FLR 70, 1983. Also *Trade Practices Commission v Parkfield Operations Pty Ltd,* (1985) 5 FCR 140.

78. See Pengilley W., 'Deregulation or Re-Regulation,' in Corones S.G., *Competition Policy in Telecommunications and Aviation,* Federation Press, Sydney, 1992, pp 111-178, at 123-124.

79. *Telecom Corporation,* (1991) 3 NZBLC 102,340, at 102,353. Also Department of Trade and Industry, supra, note 4, p 36-37.

80. *Telecom Corporation,* (1991) 3 NZBLC 102,340, at 102,349. The High Court explain what a cellular telephone service is. *'A cellular telephone system uses radio frequencies thus allowing full mobility of the user. It is no longer fixed to a wire in a house or other building but, because it is linked to the PSTN, allows immediate and simultaneous voice and other communication with the whole of the fixed wire network as well. The cellular ... network depends upon a number of cell sites or base stations which provide transmitters and receivers giving radio coverage for the individual cellular phones within a radius of the cell site. ... The user communicates by radio to the nearest cell. ... Because the radio signal from each cellular telephone is relatively weak it is necessary to have a number of cell sites to maintain the mobility. Thus by means of a process which is called hand over'* the subscriber has full mobility as he/she moves from cell to cell. Tele-point service, on the other hand, is very similar to cellular service, except the telepoint service does not offer the subscriber full mobility. Instead telepoint offers the subscriber partial mobility because the radio signal is fixed to receiver. Ibid, at 102,365.

how existing PSTN dominance could effect the operation of the cellular market. I separate allocation from "other anti-competitive practices" by discussing the acquisition rights as a source and not the effect of dominance. In this regard I consider prevention by looking at merger (acquisition) law. Other potential remedies will be discussed in the next section.

The New Zealand Government has addressed the issue of allocation by using market principles, which established a tendering system to allocate frequencies amongst interested parties. The *Radio Communications Act 1989*, in turn, granted successful applicants "management rights" over that frequency for a 20 year period, which could be traded to another party if the applicant did not wish to own them. The ability to take up those rights was subject to the business acquisition provisions of the Commerce Act (section 138).[81]

Prior to the Commerce Act's 1990 amendment, all merger applications had to be pre-notified to the Commerce Commission (now it is voluntary, see chapter seven). The Commission would grant clearance if the acquisition did not result in a dominant position, while the Commission would authorise an acquisition if dominance resulted, but was outweighed by public benefits. In 1990 the Commission was asked to rule on the acqusition of various radio frequencies following the tender of the rights to three cellular frequencies, two of which were allocated to Telecom (AMPS A and TACS B), while the other was allocated to BellSouth (TACS A).

BellSouth's application for TACS A and Telecom's application for TACS B were cleared by the Commission. However, the Commission was not convinced that Telecom's acquisition of AMPS A, the band of most interest to Telecom, would provide sufficient public benefits to justify authorisation.[82] It formed this judgment after first distinguishing the market for PSTN service from mobile service because they lacked demand and supply side substitutability. From these definitions the Commission concluded that Telecom's dominance in the PSTN market gave it a dominant position in the mobile market because of the need of cellular to interconnect with that market. It considered that this position would be strengthened with the AMPS A acquisition and that the advance of technology was too remote to affect this ruling. The

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81. Ministry of Commerce, supra, note 68, p 4. For discussion on current merger law see chapter 7. Also see Berry M.N., 'The Application of Competition Laws to Business Acqusitions in New Zealand,' in Farrar J.H. ed., *Institutional Investors And the New Takeover Regime*, Oxford University Press, 1992.

82. See the Commerce Commission, *Decision No 254*, Wellington, 17 October 1990. Also, *Decision No 256*, 30 November 1990.

Commission advised that such strengthening would not be compensated by sufficient benefits to the public.[83]

Telecom appealed this decision on the grounds that the Commission did not appropriately consider alternative mobile technologies; erred in its finding that Telecom was dominant in the mobile market; and that the acquisition of AMPS A would strengthen its dominance. Telecom also asserted that the Commission wrongly analysed likely public benefits.[84] In replying to these claims the High Court supported the Commission's market definitions;[85] and its finding of PSTN dominance and the effect this dominance had on the mobile market. The Court explains:

> In the mobile market, Telecom's market power stems from two sources, its control over the PSTN and the absolute barrier to entry of more than three competitors that is based on available spectrum rights. Counsel for Telecom sought to convince us that a vigorous competitive process could emerge from a duopoly of BellSouth and Telecom Cellular; and that Telecom Cellular should be permitted to acquire the rights to AMPS A, in order to counter the formidable rivalry of BellSouth. But even the formidable BellSouth is dependent upon Telecom for interconnections to the PSTN on suitable terms and conditions.[86]

Because of these findings the High Court concluded that Telecom was dominant in both markets and the acquisition of AMPS A would strengthen dominance in both markets.[87] It also concluded that additional dominance would not give greater public benefits.[88] For these reasons the Court declined the appeal.[89]

Telecom appealed the decision. This time it successfully petitioned the Court of Appeal for the right to acquire AMPS A, provided it did not acquire TACS B.[90] Five judges heard the case (Cooke P, Casey, Hardie Boys, McKay, Richardson JJ). The majority agreed that

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83. Ibid (No 254).

84. *Telecom Corporation,* (1991) 3 NZBLC 102,340, at 102,354-355.

85. Ibid, at 102,365. The Court did criticise the Commission's treatment of new technologies, use of time frame, and functional separation of delineated markets. However, this criticism did not change the Court's finding.

86. Ibid, at 102,380.

87. Ibid, at 102,382.

88. Ibid, at 102,388-390.

89. Ibid, at 102,390. The Court commented: *'On the side of detriment to the public are all those likelihoods of allocative and dynamic inefficiency that we have discussed, a much larger set than those considered by the Commission. On the side of benefit to the public are the likelihoods of some production or technical efficiencies, discounted however by reason of the likelihood of an enhanced propensity to internal inefficiency on the part of Telecom by reason of the strengthening of its dominance'.*

90. See *Telecom Corporation of NZ Ltd v Commerce Commission & Ors,* (1992) 4 NZBLC 102,724.

acquisition of AMPS A should not be cleared under the Act because it would result in a strengthening of dominance in both of the relevant markets. Those members who considered Telecom dominant (Cooke P, Casey and McKay JJ), did not believe this dominance to be of a "major" nature. Instead they believed it moderate for several reasons; these were:

> (1) the advent on new entrant(s); (2) the statute [the Commerce Act] as a future deterrent; (3) the transparency of Telecom's activities [achieved with disclosure regulations]; (4) Telecom's written assurance to the Crown [a pledge to act competitively]; and (5) the requirement of an undertaking by Telecom [the Court obtained a written undertaking from Telecom that it would not use its dominant position to delay BellSouth's entry into the cellular market].[91]

Richardson and Hardie Boys JJ were critical of the manner by which the High Court and Commission disregarded prospective developments because of their two year time frame.[92] While also considering time frame, Cooke P also observed that there appeared to be little interest from other parties in acquiring AMPS A, that the acquisition of TACS A by BellSouth would reduce the capacity of Telecom's existing band AMPS B, and Telecom needed additional capacity to allow a smooth transition from analogue to digital technology?[93]

The majority then turned its attention to whether the acquisition should have been authorised. In the Courts opinion authorisation should have happened because of net benefits flowing to the public. They reached this conclusion because they gauged the efficiencies of acquisition and the ability of Telecom to smoothly convert from analogue to digital technology would outweigh the "moderate" increase in dominance.[94] Of the discenting judges Richardson J believed that efficiency gains and losses should be quantified,[95] while Hardie Boys J concurred with the views of Cooke P, but added that the Court should authorise acquisition because insufficient demand existed to sustain four competitors in the cellular market?[96]

There has been some criticism in the Courts handling of this appeal. In reaching these conclusions its members tended to construe dominance in a literal manner and not in a technical sense - especially through the use of economics.[97] Specifically, prior Australian and New Zealand case law that emphasised an economic based approach was overlooked in favour of a

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91. These points are paraphrased from Longdin L., 'A Fresh Look at Dominance in New Zealand Telecommunications,' *European Competition Law Review: Analysis Section*, vol 6, 1992, pp 276-77.

92. *Telecom*, (1992) 4 NZBLC 102,724, at 102,724-102,725, CCH headnote.

93. Longdin, supra, note 91, p 275.

94. Ibid, p 278.

95. *Telecom*, (1992) 4 NZBLC 102,724, at 102,741.

96. Ibid, at 102,741.

97. Longdin, supra, note 91, p 275.

dictionary based approach. Similarly, the weighing of detriment against benefit in the authorisation proceedings did not follow the standard practice of quantifying the various amounts using economic means.[98]

11.10 Other Remedies

Besides antitrust remedies, governments also use other techniques to achieve similar ends. I will discuss these techniques by looking at the approaches taken to regulate telecommunications in New Zealand, Britain, Australia, and the United States.

The New Zealand Approach to Relief

Apart from the Commerce Act, there are few additional explicit regulations to prevent discrimination and the potential for it in the telecommunications industry. However, the Government's threat to introduce controls, should the existing regime prove ineffective, has inspired Telecom to perform accounting separations and form subsidiary companies with instructions to operate with other subsidiaries in an "arm's length" manner. These moves limit the incentive to discriminate.

The Government has regulated certain parts of the industry because of concern about the possibility of international exploitation.[99] In relation to international calling, controls address the allocation of incoming calls to service providers and the rates these providers pay the source provider. The disclosure regulations relating to privatisation direct their attention toward leased line service (both national and international); the granting of permits for customer premise equipment; and the terms of Telecom's customer discount policy.[100]

The Approach to Relief in Other Countries

The approach of other countries differs significantly to that of New Zealand. I will discuss these options by looking at the approach adopted in Britain and Australia, then that of the United States. Britain and Australia have been combined because of their similarities.

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98. Ibid, p 278.

99. Ministry of Commerce, supra, note 68.

100. Department of Internal Affairs, surpa, note 7.

a) Britain and Australia

Both Britain and Australia have antitrust statutes to limit discriminatory practice.[101] However, both countries also have regulators to manage the transition from monopoly to competitive markets. In this regard both can take pro-active steps to discourage discrimination by inserting prohibitions into the licence agreements upon which each communications carrier must legally operate.[102] An example of insertion was seen in Britain, where the Director General of Telecommunications (DGT) established and then included "fair trading rules" in BTs licence. These rules were in the CPE market and were designed to prevent cross-subsidisation; undue preference or discrimination; and the passing of information. They also detailed controls governing the attachment and certification of CPEs. To augment these rules the DGT announced a policy of active promotion and breach detection.[103]

In addition, these regulators have requested that their dominant carriers perform accounting separations between various products and establish subsidiary companies so that service prices can be unbundled and tying prevented. Besides accounting separation, the British have prevented the probability of this occurring in cellular markets by not allowing "fixed cable" operators to provide a cellular service (such forbearance makes PSTN dominance irrelevant).[104] The Australians, on the other hand, have not prevented operation but require accounting separation with terms of connection set by a regulator.[105] Separation has the purpose of allowing competition in previously closed markets because it provides a better incentive for "fair" competition.[106]

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101. In Britain they have the Competition Act 1980 while Australia has the Trade Practices Act 1974.

102. Gist P., *The Role of Oftel,* London Business School, May 1988, p 32. The author comments that *'OFTEL also included in British Telecom's (BT) licence a condition to prevent that organisation from tying sales, participating in full-line forcing, or offering aggregate rebates; if this occurs the DGT will refer the matter to the MMC'.* AUSTEL on the other hand can insert specific terms under part 5, division 3 of the Telecommunications Act 1991.

103. Carsberg, supra, note 45, pp 84-85.

104. See Geroski P., Thompson D., and Toker S., 'Vertical Separation and Price Discrimination: Cellular Phones in the UK,' *Fiscal Studies,* vol 10(4), November 1989, pp 83-103.

105. See Ministry of Transport and Communications, *Micro Economic Reform: Progress Telecommunications,* Canberra, November 1990, pp 11-12.

106. Ibid, p 5. Gist, supra, note 100, p 32. While separation will make bundling and tying less likely, several authors comment on OFTEL's lack of dedication to this task. Beesley et al., supra, note 4, the author's comment that price "unbundling" has not proceeded rapidly as was first thought. Also supra, note 4, Department of Trade and Industry, p 69. The report comments that geographical unbundling based on the cost of provision would increase the cost of rural calling while reducing urban rates. Such a policy would not be tolerated by the DGT nor the Government.

b) The United States

As with other countries, the United States has antitrust laws to limit discriminatory practice.[107] Again separations play an important part in limiting the potential to discriminate; however, the Americans have taken this process further by divesting the monopoly from competitive parts of telecommunications network.

Essentially, the separation order (MFJ) prevented local operators (RBOCs) from operating in the interexchange market (toll market); the markets for customer premise and telecommunications equipment manufacture; and that for information services (VANS). This prevention was subsequently modified if entry would not have an anti-competitive effect. The monopolies were also prevented from engaging in other non-network related lines-of-business.[108] However, concerted action by RBOCs has seen this "anti-competitive effect test" eroded with entry into some of these markets. For this reason Congress is likley to codify the MFJ.[109] With the MFJ in mind it is perhaps surprising that cellular service has not been physically separated from "fixed wire" operations.[110]

Physical separation prevents discrimination because ownership ties that are present with the other options limit the effectiveness of any directive instructing "arm's-length" negotiation. Therefore divestment will prevent forced tieins and price bundling occurring between toll and local markets. It will also prevent discrimination in specific areas of business. Besides separation, the industry regulator (FCC) has taken steps to unbundle prices in some cases - a move designed to reflect the realities of a competitive market. The FCC also continues to actively regulate, either explicitly or by surveillance, industry behaviour.[111]

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107. These include the Sherman Act and the Clayton Act.

108. *United States v American Telephone and Telegraph Company,* (1982) 552 F Supp 131, *aff'd mem sub nom Maryland v United States,* (1983) 460 US 1001. Also see CCH, 'Proposal to Codify AT&T Consent Decree,' *CCH Trade Regulation Reports,* Chicago, 25 August 1992, pp 43-47. If entry occurs, the operations to which those products relate must be formed a separate "subsidiary" entity to the RBOC.

109 CCH, ibid. Also *US v Western Electric Company Inc,* (1991) 767 F Supp 308, this case concerns an application by Western to remove the prohibition on the supply of information services.

110. Boulter et al., supra, note 65, pp 283-288.

111. See *People of State of California v FCC,* (1990) 905 F2d 1217. Here the FCC sought to remove a requirement that regulated RBOCs structurally separate regulated from non-regulated business activity. The FCC favoured removal so that the RBOCs could realise efficiencies while maintaining separation with accounting techniques. This order was overturned by the Court.

11.11 Recommendations

From this review of regulatory practice there are essentially three considerations when controlling anti-competitive practices. These relate to:

a) general antitrust law
b) additional "specific" regulation, whether a threat or actual
c) separation of business lines

The degree to which any one country relies on any of these practices varies. Although all countries have used separation, the approach to antitrust and additional regulation varies by country. The British and Australian Governments have primarily used the path of additional regulation coupled with a guiding industry regulator to detect and prevent anti-competitive behaviour. The United States (US) also has a regulator, but its role has been largely to enforce the antitrust statutes rather than guide industry with specific directives (although the proposal to codify the MFJ moves the US toward a British/Australian regulatory relationship). New Zealand, on the other hand, has opted not to use a specific industry regulator and has instead relied on general antitrust law coupled with a threat of additional regulation should that prove ineffective.

With these differences in mind, I think separation has a valuable role in the regulation of a natural monopoly industry. Separation provides a better incentive for an entity to engage in pro-competitive behaviour because less potential exists for discrimination. However, the degree of separation will determine the effectiveness of this stance, because merely divesting all parts of an organisation to leave the monopoly will result in net inefficiencies. Therefore consideration should also be given to subsidiary companies and profit centres.

I believe antitrust should play a large part in the resolution of alleged discriminatory practices. Similarly, the use of merger law to resolve acquisition disputes unravels the difficulties associated with preventing efficient acquisitions per se or allowing the acquisition if it will only lead to net inefficiencies. I reach this conclusion because the practices I have commented could occur, and have occurred in other industries. For this reason I believe the courts have the potential to adequately discuss the issues in hand and to reach - provided there is adequate legislation and judicial commitment - appropriate conclusions on alleged misuse of

market power. Use of antitrust will be more efficient because it pushes the cost of action onto the benefiting parties, while separation enables conclusions to be reached more quickly.

Therefore general antitrust laws should be used first; followed by the threat of amendment; then industry specific forms of regulation. In isolation specific regulatory bodies hardly seem necessary, but they could be valuable if required to perform interconnection and pricing tasks. These recommendations best suit the Government's objective of a liberalised market, but recognise the potential of a threat to intervene.

11.12 Conclusion

In this chapter I have discussed the potential of a vertically integrated monopolist using the power obtained from the natural monopoly portion of the local loop to distort the operation of other markets. The distortions considered were those that tied or price bundled a number of markets, or required consumers to exclusively deal with the monopolist. Consideration was also given to distortions in specific markets.

Regulatory policy should seek to limit or prevent such acts. In this regard I discussed the approach many countries have taken in forming regulatory policy. In this light separation will eliminate much incentive to discriminate; however, the degree of separation will always depend on the net efficiencies such a practice will realise. Therefore the degree of regulation will depend on the extent of separation. When selecting the appropriate policy, certainty of application and the ability to prevent anti-competitive acts are appropriate considerations. For these reasons I favour the use of general antitrust law rather than a threat or industry specific regulations and regulators, because the courts have proved themselves capable of reaching appropriate conclusions. However, a threat will always be appropriate should these suggestions prove ineffective.

Chapter Twelve
Conclusion

12.1 Introduction

The telecommunications industry has perhaps one of the most rapidly advancing technologies in the world. This advance has led to the movement from the traditional bounds of service. Now telecommunications companies provide not only "simple" telephone service, but telecommunication links also facilitate the movement of electronic mail, facsimile communication and computer data.

The major goal of privatisation was to spur this movement by optimising management's incentive to keep pace with technology. Privatisation would provide this incentive because the market for corporate control and the threat of bankruptcy would penalise managers with takeover if they did not maximise profit. This penalty, in turn, will motivate managers to minimise cost by optimising investment now. However, this same penalty will also provide an incentive to maximise revenue by pricing service where marginal cost equals marginal revenue.

To counter this later incentive, and to provide increased reason to minimise cost, the Government liberalised telecommunication markets so that they would become more efficient. Liberalisation had the objective of allowing entry in areas where natural monopoly characteristics did not exist. But access to many of these markets depended on whether the monopolist could use remaining natural elements to foreclose access. The question of price in parts of the industry with natural monopoly characteristics was also relevant.

Therefore while competition was seen to be the primary regulator of activity, the ability to use the natural monopoly to foreclose access and price above a competitive level focused attention toward "residual" forms of regulation. Kahn explains:

> Where competition is not feasible throughout an industry or market, as in the traditional public utilities, entry of unregulated competition can introduce distortions so severe as to make the mixed system the worst of both possible worlds. The preferable remedy is not to suppress the competition, but to make

> the residual regulation as consistent as possible with it. That seems to be the direction in which regulators are moving.[1]

Regulatory consistency has been the subject of this thesis, with the conclusions reached in previous chapters being summed in this chapter. In this regard I will consider efficiency issues followed by regulatory solutions and conclusion.

12.2 Efficiency Issues

When related to telecommunications, most agree that the local residential and rural portion of the PSTN has features resembling a natural monopoly. These features, along with entry barriers and demand characteristics, enable the owner of the monopoly to price above cost in that market. From this strategy the monopolist could then use predatory pricing tactics to extend the monopoly to other markets. Such extension will initially price service below cost, then, once competition has been eliminated, shift price to the monopoly level. The success of this strategy will depend on the height of entry barriers following predation.

As well as pricing strategies, the monopoly also permits the monopolist to limit competitive endeavour in markets that rely on access to the monopoly market. For example, competition could be limited in non-monopoly portions of the PSTN by not allowing alternative operators connection to the "local loop". Competition could also be limited in non-network markets by making the provision of "other" service dependant on the supply of the monopoly service. Besides anti-competitive practice in established business areas, the monopolist could use the PSTN to limit competition in emerging areas of technology; however, this possibility could exist irrespective of the PSTN.

Therefore the existence of a natural monopoly raises several important issues concerning the efficiency of production and supply in monopoly and non-monopoly markets. With regard to the monopoly, pricing above or below cost pricing will be allocatively inefficient because it will cause consumption at levels that deviate from the competitive ideal. It will have a secondary effect related to the efficiency of investment because above cost pricing has the

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1. Kahn A., 'Deregulation: Looking Backward and Looking Forward,' *The Yale Journal of Regulation*, vol 7, 1990, pp 325-354, at 329. Also see Wenders J.T., 'Deregulating Telecommunications,' in Meiners R.E., and Yandle B. eds., *Regulation and the Reagan Era: Policies Bureaucracy and the Public Interest*, Holmes & Meier, New York, 1989, pp 104-131, at 127. He comments: *'There are two key ways of improving the economic performance of the US telecommunications industry. The first is by introducing market forces into a system long ossified by protection and regulation. The second is by instituting regulatory procedures that approximate a market outcome'.*

potential to cause excessive investment in monopoly markets, while below cost pricing will lead to insufficient investment in either the monopoly or other markets.

The monopolist can also affect competition in non-monopoly markets by foreclosing access to the monopoly market. Obviously foreclosure - either complete or on restricted terms - will prevent competitors forcing the monopolist toward cost based pricing. Foreclosure will also limit the realisation of productive efficiencies because the average cost of supply will be greater with one firm than many. Issues of price and foreclosure are also relevant when acquiring a business because the acquisition may enable this to occur.

With the potential for efficiency distortions in mind, the remainder of this chapter will discuss the regulatory solutions, considered in previous chapters, which had the objective of countering dominance. These chapters approached regulation relating to price, network interconnection and other anti-competitive actions from an efficiency perspective. This will be the approach taken in this summation. However, I will first discuss the topic of separation, the degree of which will determine the need for regulation.

12.3 Suggested Regulatory Response

When formulating a regulatory response, policy makers should focus primarily on the objectives of Government when detailing the extent of intervention. Obviously when the possibility of relying on competition exists, governments should take advantage of that potential because it will best ensure the attainment of efficiencies, both static and dynamic.

However, actual competition may not always be possible because cost and demand characteristics could make it more economic for one firm to exist in a market than many. The mere existence of a natural monopoly will not by itself cause inefficiencies - indeed by definition a natural monopoly is the most efficient form of production. Yet the potential exists for the monopoly to be allocatively inefficient. The existence of the monopoly could even limit competition in markets where "competition" can exist.

The potential for inefficiency depends on whether consumers can forgo or substitute from local telephone service. It also depends on the contestability of the local loop. Unfortunately these attributes are not characteristics of the telecommunications local loop. Indeed high customer dependency and high entry barriers enable the monopolist to distort monopoly market

operation. It also, because of the dependence of other markets on the monopoly, enables the monopolist to distort market operation where competition could exist.

Nevertheless, before moving from the competitive model, the Government should consider the extent of monopoly loss. If the monopolist's market power allows only limited distortion, the Government should not intervene because the accumulated cost of intervention (ie. the costs associated with initiating the regime; running the regime; and the inefficiencies associated with the regime); could be greater than the benefits derived.

Unfortunately dependence on the local loop causes consumers to demand similar levels of output irrespective of price, so distortion will most likely be large. Therefore policy makers should consider intervention to force the realisation of efficiencies. Once this is decided, the question then turns to what type of regulation should be selected. A number of strategies exist, these range from light-handed to heavy-handed approaches.

Light-handed regulatory tools place the onus on the party with market power to conform to the objective of the Government. To conform to these wishes the party will do so only with incentive. Therefore the Government should make the alternative to that regime of greater burden than the existing one. In this way the Government shifts the cost of regulation to these parties. Heavy-handed regulation, on the other hand, does not give the option to conform - instead the party under control must adhere to requirements of the regime. In other words, heavy-handed regulation requires "you will" adhere to the directives of Government, while the alternative light-handed style only requires that "you should", but backs this requirement with the threat "or else".

The advantage of light-handed regulation over heavier-handed techniques is that it does not prescribe "how" a party should conform to its requirements. In this way it will be more flexible. By prescribing how, regulation provides some guarantee concerning the stated objective. However, by providing this guarantee, the potential exists for the mechanism that provides the guarantee to change the incentive structure facing the firm. This change will in all likelihood lead to inefficiencies. For these reasons I have selected light-handed forms of regulation to control behaviour where possible. Such selection makes maximum use of the competitive process and so fits in with the Government's goal of a liberalised economy. But because these selections do not completely prevent exploitation, the Government should not

forgo the opportunity of using heavier-handed regulation. I now discuss the concept of separation followed by pricing, interconnection, and other issues of anti-competitive concern.

Separation

Most accept that a natural monopoly exists for the supply of local residential and rural consumers. Dependence on this monopoly allows the owner of it to discriminate between other operators in competitive markets because of the vertically integrated nature of the industry. This occurs because the monopoly owner has an incentive to maximise revenue in competitive markets by favouring its operations in competitive markets over those of competitors.

To eliminate this potential the Government could separate the ownership of the monopoly from areas of competitive potential (for example, separate the local loop from toll, directory publication and cellular).[2] It could even separate the monopoly horizontally so that separated parts of the local loop could then compete for custom in other parts (assuming that common carrier rights exist). While separation will enhance competitive potential, its scale will depend on the likelihood that technology and demand changes will not erode the natural monopoly in the future. Similarly, whether net benefits result will depend upon the costs associated with separation. Such costs will relate to the inefficiency associated with separation and the continued cost of maintaining the initial separation.[3]

When related to telecommunications, the obvious benefit of separation will be the ability of competitors to gain non-discriminatory access to the local network. Consumers will realise benefits because competitors will have an incentive to reduce cost and therefore price. Horizontal separation will also produce benefits because contestability amongst service providers from different geographic regions will likewise reduce price. Thus measuring net gains becomes important to enable comparison with alternative regulatory strategies.

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2. Jarden Morgan NZ Ltd, *Regulatory Issues Relating to Privatisation,* Report for Telecom Corporation of New Zealand Limited, August 1989, p 84. They comment: *'the basic rationale for the break up of AT&T was to facilitate the interconnection of long distance carriers with the local networks. ... This approach aimed to reduce the problems over access to the local networks ... by severing ownership ties between them and long distance companies, thereby removing any incentive for the local companies to give favourable access to related companies; ...'.*

3. Electricity Task Force Report, *Structure, Regulation and Ownership of the Electricity Industry,* Government Printer, Wellington, September 1989, p 202. It comments: *'The difficulty with restructuring is that the industry may have combined competitive and uncompetitive activities in the first place because that was the most productively efficient way of organising the industry. There may be considerable efficiency gains from vertical and horizontal integration'.*

While it would seem that separation could limit the need for regulation, the benefit of separating may only be short-term because technology alterations promise to erode many of the benefits associated with separation. Besides considering benefit, one should also consider cost. Separation will impose significant costs because apart from the cost of physically separating a company, the result of the process will cause production, overhead and management inefficiencies; it may even reduce the ability to co-ordinate and plan. Finally, changing demands and technologies could make it costly to maintain the separation because a prohibition on market entry will prevent integration to obtain "net" cost efficiencies.

Despite net efficiency concerns, problems could exist distinguishing the monopoly from parts of the business with competitive potential. For example, where do you draw the line between toll and local residential traffic, toll and rural traffic, or central business and residential? The inability to distinguish makes separating the ownership of monopoly and non-monopoly business difficult, both now and particularly in the future because demand and technology changes promise to alter what we classify as being a natural monopoly.

Therefore I do not favour separating the ownership of the local residential and rural loop because of its likely short-term benefit as opposed to the more probable long-term cost. I support this conclusion with the finding that advances in technology could soon outdate the initial distinction. Nevertheless, one should not discount the idea of separation for several reasons. First, accounting procedures could be used to separate monopoly and competitive activities. These separate activities, in turn, should then be instructed to conduct business with "all-commers" on an arm's-length basis. This type of separation will be relatively simple when directed toward the allocation of direct supply costs, but its success will depend on the "appropriate" allocation of joint and common costs. Irrespective of any difficulties this may pose, allocation provides the advantage of flexibility in that its procedures require no assumption concerning the "competitive" or "monopoly" nature of business. Similarly, continued integration maintains efficiencies and eliminates the need to incur separation or maintenance costs. A second separation method would be the formation of subsidiary companies. Again these companies should be retained until demand and technology characteristics did not warrant the distinction. Obviously such separation would disintegrate activity, but the efficiencies lost will be less than full separation while providing added incentive to negotiate on an arm's-length basis.

For the above reasons I believe accounting separation and profit centre formation will best suit the industry because the benefits associated with greater separation do not seem to outweigh long-run costs. However, if accounting separation fails, or the Government believes it will fail, the Government should threaten the monopolist with the requirement to form subsidiary companies. Full industry separation does not seem warranted. I reach this conclusion based on likely technology and demand trends. The conclusion should only be interpreted as relating to the monopoly/non-monopoly distinction. In no way should it prevent separation between various forms of competitive activity. Indeed the characteristics between different lines of business may warrant such distinction. For example, it seems appropriate to separate the radio based technology of cellular service from that of a wire based service.

Pricing

When discussing price, there are essentially two policy concerns. Firstly, the monopolist can exploit consumers in the monopoly market by pricing above cost. Secondly, the monopolist can price below cost in competitive markets - probably by using profits from the monopoly market - to drive competitors from the market so that he/she can raise price above cost after exit. Obviously the success of this later strategy depends on whether the monopolist can construct barriers to prevent re-entry. I will discuss each strategy in turn.

a) Exploitative Pricing

When discussing monopoly market control the Government must ensure consumers in these markets are not exploited because by themselves they will not have the resources or co-ordination to limit price. Besides, no law exists for them to take action anyway. Therefore the Government should limit the monopolist's ability to exploit by using either light-handed or heavy-handed controls. For reasons stated above, governments should use light-handed controls in the first instance. They should not use heavy-handed controls, although available under the Commerce Act, because of the adverse incentives these controls create when placed on a firm. Similarly, these controls should not be used because they give the controlled firm less ability to price flexibly and could even delay future entry.

For these reasons governments should select light-handed regulation, which places the onus on the firm to conform to a requirement of Government. Such a control should place the burden of proof on the monopolist and provide sufficient threat so that adhering to the light-

handed control will be less of a burden than the control detailed in the threat. At no time should the Government rule out the option of heavy-handed regulation.

For example, the Government could require the monopolist to price local residential and rural service based on provision cost. They could police this by monitoring consumer complaints, or taking a more active role and introducing a regime requiring the monopolist to publish - either publicly or confidentially - charts of accounts and cost.allocation information. Such publication is not likely to burden the firm because the information will already be available to management. Finally, the Government will probably ensure conformity if the monopolist perceived the threat of additional action to be credible. In this regard the Government should detail the likely regulatory response to make the monopolist aware of the probable action and likely cost of heavier-handed regulation.

As well as monopoly market pricing concerns, price controls have been used to limit price in areas with competitive potential. For example, the English and Australian Governments control the price of business calls as well as national and international tolls. Similarly, the Americans control the pricing of their dominant toll carrier. These countries justify the control of "competitive" service because they believe it aids the transition from monopoly to competition.[4] However, pricing controls should not be used for these objectives. Instead, the competitive market should be used because it will force entry when prices are high and force exit when too many firms are in the market. Exploitation will also prompt entry into markets categorised as barely competitive more rapidly than if they were controlled. In other words, competition "in" and contestability "for" a market will force price toward cost and ensure that costs are minimised.

Therefore the Government should use light-handed regulation to combat exploitative pricing. This response should only impact on markets with a monopoly component and should not force the monopolist to deviate from efficient pricing. If the Government requires deviation it should use tools of social policy to target relief toward desired recipients.

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4. Such transition includes limiting the impact of rapid rebalancing on consumers and giving entrants greater potential to enter; in other words a type of "infant" industry subsidy.

b) Predatory Pricing

To some extent the issues relating to predatory pricing disappear if the monopolist cannot extract profits from the monopoly. However, the Government should still address the issue of resolution because the monopolist can use the characteristics of the monopoly to limit competitive potential in other markets.

The regulatory response differs to monopoly markets because predatory pricing affects the ability of a competitor to compete. Therefore it seems appropriate that if he/she believes they cannot compete, then they should seek and pay for redress. For this reason resolution by using antitrust law seems the most appropriate action. Such laws are, like the regulatory responses above, light-handed. In this way it provides the monopolist with the pricing flexibility required to compete but at the same time limits the ability to predate. Such characteristics are not features of heavy-handed regulation.

Interconnection

Besides pricing issues, a monopolist's competitor will require interconnection to the monopolist's natural monopoly network in order to compete in markets where the monopoly does not exist. Interconnection will allow a toll network competitor subscriber access at either end of service; for example, when calling from Auckland to Wellington a toll company must use the monopolist's local exchanges to terminate and originate service. Similarly, interconnection will allow subscribers from competitive parts of the local network to access subscribers in the monopoly network; for example, central business district or cellular callers must use the monopolist's facilities to terminate calls. However, reciprocation exists with this arrangement because monopoly subscribers must use the competitor's facilities to terminate calls.

The competitor will require connection because if it was not granted entry would probably not occur - or occur to the degree it otherwise would - because the competitor could not economically replicate the monopoly portion of the PSTN. While the competitor will seek access in the first instance, once it has been granted the terms and price of access become vitally important to determine whether the competitor can compete with the monopolist. The terms also directly affect the efficiency of market entry. For these reasons the terms of access

should be fair and reasonable (equate) when compared to those of the monopolist. If this does not happen the competitor could allege discrimination amongst suppliers.

To ensure access, the Government could use either light or heavy-handed controls. British, Australian and United States Governments have all used heavy-handed controls, which allow industry-specific regulating bodies to determine the price and terms of connection. I do not favour this approach, because a government should make greater use of light-handed controls before having to resort to explicit control. For this reason negotiated interconnect agreements backed by the Commerce Act; the disclosure of cost allocation and chart of account information; and the threat of additional regulation, seem most appropriate. This process has the advantage that the cost of resolution falls on the negotiating parties, therefore these parties will maximise their use of the competitive process and as a result use the court system efficiently.

In suggesting light-handed control one should consider the issue of dominance and how the monopolist can use that dominance to delay proceedings. To an extent prior findings of the Court will counter this dominance (because of their precedent value); however, the Government could, at the same time, take a more active role to limit the effect of dominance. This role would not mean the Government interfered with party specific negotiation, but merely laid a framework on which parties could negotiate. It would create this framework by extending current policy statements to cover areas of recurring concern. These areas, based on national and international experience, relate to numbering and directory access; points of interconnection; access codes; interconnection fees; and cross-subsidy obligations. When forming a statement the Government should call for industry submissions and consider overseas experience.

The Government should outline how it will respond if the existing regime proves unworkable. This outline will, in the eyes of the dominant party, increase the credibility of response. Therefore that party will have less incentive to delay proceedings provided the threat is a sufficient deterrent. Finally, to speed the resolution of disputes the process of getting to court and the in-court process could be streamlined so that disputes are settled more quickly. Of course precedent from prior cases will help in this regard.

Other Issues

Apart from pricing and interconnection issues, the monopolist can use monopoly power to affect competitive market operation in other ways. All of these techniques have the aim of limiting the ability of competitors or potential competitors from competing. For example, when related to telecommunications the monopolist could tie a competitive service to residential access; discount a package of monopoly and competitive services; request that a supplier deal exclusively with the monopolist; or limit the potential for competition in specific markets by discriminating. Therefore regulation should prevent these actions when anti-competitive.

These practices have the objective of limiting competition. For this reason antitrust law again seems the most appropriate mechanism to attack these practices. This is because parties alleging these practices should pay the cost of action - a cost that will most likely result in efficient use of the Act. The courts have another advantage in that determining the anti-competitive nature of these practices will often be a question of fact. Consequently the courts' experience in discussing these issues will be of value because precedent will help to make the distinction between activities of a competitive and anti-competitive nature.

12.4 Conclusion

The telecommunications industry can be categorised as a network industry consisting primarily of switched wire links, which allow communication between subscribers. Latterly some of these links have been provided by radio based technology, but even with this advance radio still relies on fixed wire service to originate or terminate calls. Besides these links, the ability to make calls leads to other services that ensure the smooth operation of the network. For these reasons telecommunications will most likely be an integrated service.

However, the integrated nature of service can be detrimental to an efficient competitive market. This could result because cabling cost gives parts of the fixed wire network characteristics resembling a natural monopoly. For this reason regulation should be considered to "promote" competition.

When detailing regulation I do not consider a heavy-handed style appropriate because it conflicts with the goal of liberalisation and may not be necessary. It could even detract from the goal of efficiency. Instead I prefer light-handed regulation because it provides the

flexibility to respond to competition but provides the incentive, by threatening to use regulation that would be a greater burden, to limit anti-competitive behaviour.

Therefore to provide maximum incentive to comply the Government should outline its light-handed policy goal. This goal should adhere to the principle that when competitors feel disadvantaged they should incur the cost of rectifying their concern. Consumers, on the other hand, should not bear this cost because of the difficulty they face in taking action. Consequently the Government should legislate to allow competitors to take action and detail its position on consumer issues.

Light-handed regulation, on its own, will not ensure conformity; for this to occur the Government must monitor the actions of the monopolist by requiring disclosures and listening to complaints. The Government must also detail the likely response should the monopolist not conform. Such detail will encourage the monopolist to conform because it will increase the credibility of action. Where issues are of recurring concern, the Government could outline its position in greater depth so that competitors and the monopolist have a basis from which to negotiate. These statements will provide greater guidance for the monopolist on the possibility of further intervention.

These regulatory guide-lines have been developed with the objective of an *`efficient and fair market in telecommunication goods and services'* in New Zealand.[5] Such a market will be essential to the economic development of New Zealand because telecommunication, like transport and energy, affects all industry sectors and all consumers. Therefore for efficient investment both within the industry and outside it, I believe the Government should rely on competition in the first instance - in other words, remove statutory controls on entry. This philosophy should combine with a light-handed regulatory stance to promote competition and protect consumers. Such a stance, while not perfect, recognises the characteristics of the competitive framework and does not create the inefficiencies of heavy-handed regulation. In this way it acknowledges recognises the rapid technological advance occurring in the industry.

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5. Ministry of Commerce, *Telecommunications Information leaflet No 1: New Zealand Regulatory Environment for Telecommunications*, 28 November 1991, p 1.

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Table List

Appendix One
The Historical Development of Regulation in New Zealand

Regulation was not initially used in New Zealand's colonial economy, but became more of a policy instrument as the century progressed.[1] Early regulatory moves were indirect in that they relied on the state owning enterprises. The government also regulated the operation of factories. Direct regulation emerged from 1905 with the Agricultural Implement Manufacture Importation Sale Act, which sought to address the dangers associated with exploitative pricing. The Monopoly Prevention Act of 1908 followed which prohibited private sector monopoly profiteering, while the Commercial Trusts Act of 1910 was enacted to repress monopoly behaviour. However, both these statutes were not particularly effective.

The First World War saw the Government set the first comprehensive package of industry related regulation. The 1919 Board of Trade Act contained a general provision allowing intervention when it increased New Zealand's welfare, otherwise specific sections promoted *`measures to encourage competition, to regulate monopolies in industry and to regulate price levels'*.[2]

The depression of the 1930s saw a change in direction, which was to set this country's regulatory framework which lasted into the 1980s. Distrust for the market system prompted this change which saw the introduction of import protection in 1932-33, price fixing and profiteering legislation in 1935, import licensing and exchange controls in 1938, and, with the out-break of World War Two, further controls to allocate resources by directive. Such regulation continued during the late 1940s and early 1950s with controls to license market

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1. See Bollard A., 'More Market: The Deregulation of Industry,' in Bollard A., and Buckle R. eds., *Economic Liberalisation in New Zealand,* Allen and Unwin/Port Nicholson Press, Wellington, 1987, p 26.

2. Ibid, p 26.

entry and protect local industries from imports. These moves created monopolies which necessitated the 1947 Control of Prices Act and then the 1948 Economic Stabilisation Act[3]

The 1950s and 60s saw a further change in direction with the removal of many price controls which caused many trade associations to set their own controls on price. To restrict this the 1958 Trade Practices Act sought to prevent practices when deemed contrary to the public interest. This act, plus the 1930s controls, were to remain the basis of New Zealand's regulatory stance for the 1960s and the majority of the 1970s.

During the 1970s our regulatory stance changed because a different threat faced New Zealand and the world. Inflation, brought about by oil price shocks, was a major concern. This led New Zealand to respond with the Price Justification Scheme of 1971; the Stabilisation of Prices Regulations of 1972, 73 and 74; the Commerce Act of 1975, plus several subsequent amendments. Many of these controls were removed by the Price Surveillance Regulations of 1979. However, further controls were imposed in 1983 with the Economic Stabilisation (Prices) Regulations.

From these measures one can see that New Zealand has relied on regulation in some form or another for most of this century. Certainly controls became tighter with wars, but the depression of the 1930s increased significantly the level and extent of these measures. It could be argued that regulatory emphasis has altered over this century with regulation initially focusing on restrictive trade practices, then shifting during depression toward rectifying perceived market failures, then after a period reducing controls, price regulation was used to promote economic stabilisation. Finally, many controls were abandoned with reliance placed on antitrust (restrictive trade practice) laws.

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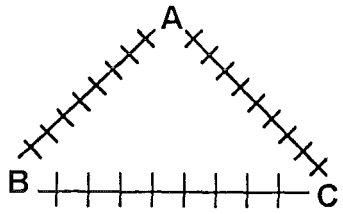
[3]. Ibid, p 27. The 1948 Act had broader powers than its 1947 predecessor. For instance Bollard comments that the Act allowed the minister to regulate industry marketing, equalise returns for different classes of goods and to recover public subsidies.

Appendix Two
The Ability of a Multiproduct Natural Monopolist to Cross-Subsidise

The ability of a multiproduct monopolist to cross-subsidise will be shown by the use of an example based on railway construction. This example will show how, and at what price, three towns, Alpha, Bravo and Charlie can be connected.[1] The situation can be seen in the following diagram.

Symmetric Railway Lines



(figure A2.1)

The costs of railway construction are as follows:

$$C(ab) = C(bc) = C(ca) = 10 \quad (1)$$
$$C(ab,bc) = C(ab,ca) = C(bc,ca) = 18 \quad (2)$$
$$C(ab,bc,ca) = 24 \quad (3) \qquad \textbf{(A2.1)}$$

These equations indicate that a global natural railway monopoly exists between all three towns because the costs of construction (3) is less than constructing two lines, and then adding one later (1+2), or constructing all of the lines individually (1+1+1). Price will be sustainable when all costs are covered by price and when no other firm can enter the market

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1. See Berg S.V., Tschirhart J., *Natural Monopoly Regulation: Principles and Practice*, Cambridge University Press, New York, 1988, p 249.

and profit at a lower price. Therefore if the railway offers the following price that vector will be sustainable, as will a number of others, because, given the cost information in equation A2.1, no entrant can construct an alternative railway and charge a lower price.

$$P_a = P_b = P_c = 8; \quad (24/3) \qquad \textbf{(A2.2)}$$

However, the incumbent may not be able to charge these prices if the users of the railway have a different willingness to pay ($W_a = 5$, $W_b = W_c = 10$). In this instance the following pricing strategy will ensure full connection:

$$P_a = 5, P_b = P_c = 19/2 \qquad \textbf{(A2.3)}$$

However, this price vector will no longer be sustainable because A will only pay 5 instead of 8. Entry will occur because an entrant can serve firm B and C at a lower cost than that proposed by the incumbent (A2.1). To be sustainable each user must be at least willing to pay the marginal cost of serve, this was 6 in our example and found by the following equation C(ab,bc,ca) - C(ab,bc). If prices less than marginal costs are charged cross subsidisation will occur because:

> ... the total revenue generated by one output [A] does not cover the total marginal cost of producing that output. Therefore, the consumers of the output must be receiving subsidies from consumers of other outputs [B and C] if the firm is financially viable.[2]

However, at the same time price must cover the total cost of supply so this requirement sets an upper constraint on what a monopolist can charge.[3] Optimally efficient prices will, therefore, lie between two bounds which if prices fall outside of may promote entry because of the profit created from cross subsidy or from customer exploitation.[4] If these requirements are placed in an equation we are left with the following break-even constraint:

$$MC_a + MC_b + MC_c + X = C(ab, bc, ca) \qquad \textbf{(A2.4)}$$

Where MC equals the marginal cost of connecting each firm, 6 in our example, X equals the loss due to marginal cost pricing and C(ab, bc, ca) equals the cost of constructing the three railway lines. X can be recovered by charging individual firms increments over marginal cost. This process was seen in chapter two, section 2.5.

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2. Ibid, p 94.

3. See Panzer and Willig, 1977b, who comment on this requirement of sustainability.

4. See Sherman R., *The Regulation of Monopoly,* Cambridge University Press, New York, 1989, chapter 6, where he notes that cross-subsidisation may occur on equity grounds. If this happens the resulting prices will be unsustainable, in a perfectly competitive environment, so the incumbent must be protected from entry.

Appendix Three
Interconnection

PART 2

OVERVIEW

TELECOM AND NETWORK INTERCONNECTION

Interconection Defined

Network interconnection is the physical connection of a service operator's network to a Telecom public switched network.

There are several important aspects to this concept.
Firstly, interconnection refers to the connection of two facilities-based networks in a physical sense.

Secondly, interconnection relates to connection to a Telecom network. Telecom does not seek to impose conditions upon interconnection between non-Telecom networks. Similarly, Telecom does not impose conditions on the internal design of another service operator's network which is connected to the Telecom network. However, this is subject to the proviso that the service operator may not allow anything to be done to its network which might cause damage to Telecom's network. This principle is covered by the Telecommunications Act. Also, where there is a chance that the call could be transmitted internationally, the overall connection should comply with CCITT standards. If the connection does not comply, then Telecom could be placed in breach of several international obligations.

Thirdly, the public switched networks are specifically the Telecom telephone, telex, dates, and packet switched networks. The connection of unswitched (leased circuit) and private networks is part of the normal business of Telecom.

Fourthly, the service operator is paying Telecom for services we supply. These services are provided to enable the service

operator to market services to the public. Thus the nature of the interconnection relationship is that of a customer (the service operator) and a vendor (Telecom).

Finally, the service operator is making use of Telecom's facilities for the purpose of providing telecommunications service to the public. Interconnection is not about providing special facilities to customers wanting to facilitate their activities in markets other than telecommunications.

TELECOM OBJECTIVES

Telecom welcomes competition and shares with Government two broad objectives for the telecommunications business:

- to deliver and efficient, internationally competitive and technologically modern telecommunications service to the economy; and

- to achieve a reasonable rate of return on the taxpayers' investment in telecommunications.

We fully support the Government's proposals to create a competitive telecommunications environment in New Zealand. We believe that this policy will create a dynamic and efficient industry well geared to meeting the needs of New Zealand customers. Undoubtedly there will be substantial flow-on economic benefits from this policy.

Telecom also supports the Government's view that in general the industry should be allowed to develop under normal commercial legislation such as the Commerce Act, rather than risk potential inefficiencies arising from Government intervention by way of regulation.

We also believe that Telecom can benefit from the introduction of competition, as competitive pressure stimulates internal efficiency gains and a closer alignment of the objectives of management with the needs of customers.

It is in recognition of the gains for Telecom, the industry, and the national economy that Telecom is facilitating competition by making available interconnection to its networks.

Many potential market entrants need access to Telecom facilities if they are to successfully compete. Accordingly, we are making such facilities available via interconnection on reasonable terms to competitors.

This does not mean that Telecom needs to go so far to facilitate competition that it will forgo its rights to sound business practice. For example, declining to supply services on the grounds of inadequate technical or other standards or lack of credit worthiness could not be construed as evidence of anti-competitive intent. However, we will be guided by the maxim that every negotiation for interconnection should result in a valuable customer.

Thus, any service operator seeking interconnection to Telecom's network is a customer, albeit a customer with special requirements. Telecom is mindful of its obligations under the Commerce Act not to use its dominance in any market for anticompetitive purposes. Conceptually there is little difference between providing a telecommunications service to an end user customer, to a customer offering resale of those services, or to an organisation providing a telecommunications service as another service operator. In each case, Telecom wishes to serve its customers' needs.

Availability

The speed with which interconnection arrangements can be put in place depends on the locality, the quantity of circuits that are required and the nature of the interconnection sought.

Our ability to provide interconnection when and where the customer wants it depends to a large extent on these factors of place and volume. In general, however, interconnection at the line level is no different to the connection of any business customer, and service will be in much the same timeframe.

Network interconnection at the more complex inter-exchange level may need to be handled differently, depending on the customer's exact needs. In general, Telecom would normally expect to take no longer to provide interconnection than to connect any other comparable customer facility.

It is in everybody's interests to get in touch with us at the earliest opportunity, so as to allow for plenty of time for both parties to do the necessary work.

If, for example, Telecom needs to purchase extra equipment, or advance timings for construction projects, it might not be immediately possible for us to meet precisely the dates customers want.